

Appendix Three-E

Major Project Summaries

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Major Capital Project Adjustment Summary

The following table summarizes, by project as applicable, Liberty's adjustments for true-up to actual cost as of June 30, 2001, for excess AFUDC, for ABB-related excess overtime and expediting costs. The table also includes Liberty's recommended adjustments for project management and for improperly assigned costs specifically related to the Northwest project.

Major Capital Projects Adjustment Summary – Part One

Project	True-up	AFUDC	ABB Related	Project Mgmt.	Northwest Issues
Northwest			\$955,729	\$914,369	\$3,432,121
Diversey			1,258,852	2,326,188	
Ohio Ring Bus	(\$76,339)		939,643	2,766,543	
Kingsbury	7,252,076			2,883,656	
LaSalle		\$4,442,568			
Quarry	(323,077)				
Streator	22,614				
Antioch		2,088,324			
Wilmington	30,594				
Evanston	232,873				
Algonquin	2,164,689				
North Huntley Feeder	149,853				
Garden Plain	(153,152)				
Woodstock	(152,054)				
Emergency Work Orders		917,540			
Total	\$9,148,077	\$7,448,432	\$3,154,224	\$8,890,756	\$3,432,121
Report Reference	III-27, 34	III-27, 28, 35	III-24-28, 39	III-27-28, 42	III-27, 34
Calculation Reference	Appendix Three-F	Appendix Three-E	Appendix Three-C; Appendix Three-D	Appendix Three-E	Appendix Three-E

The report reference indicates the pages in Chapter Three where the adjustment is discussed. The calculation reference indicates in which appendix more information on Liberty's calculation methods can be found.

The following table summarizes, by project as applicable, Liberty's adjustments for excess ComEd hourly and salaried overtime, for related adjustments for employee benefits and allocated overhead, and for excess contractor overtime.

Major Capital Projects Adjustment Summary – Part Two

Project	ComEd Hourly OT	ComEd Hourly Benefits/OH	ComEd Salaried OT	ComEd Salaried Benefits/OH	Contractor OT
Northwest	\$20,254	\$21,654	\$2,480	\$2,651	
Diversey	76,914	88,395	0	0	\$47,958
Ohio RB	13,847	15,393	7,556	7,584	153,435
Kingsbury	56,724	92,688			1,024,208
LaSalle	131,407	140,488	31,450	33,624	23,939
Elmhurst- Oak.					383,160
Aptakisic	31,261	34,802			
Quarry	25,654	28,729			
Streator	26,121	33,835			
Wilmington	30,450	47,548			122,950
Evanston	8,048	10,686			
Algonquin	7,337	12,008	7,916	12,183	3,356
North Huntley Substation	23,903	25,555			
Garden Plain	12,418	20,019			
Woodstock	20,552	33,527			
Sandwich	81,144	86,751			
East Rockford Transformers	3,689	5,494			
East Rockford 138kV	12,175	15,734			
Warrenville Substation	24,455	31,603	2,430	3,140	
Warrenville Dist. Line	6,505	6,955			
S. Pecatonica	15,510	16,593	1,396	1,492	
Crystal Lake	14,105	18,061			
University	54,623	58,398			
Tinley Park	18,677	19,968	454	485	
Downers Grove	8,691	9,310			
Cary	14,651	15,663			13,022
Goose Lake	3,138	3,356	894	956	
Zion	19,139	20,462	669	715	
Hillcrest	5,902	6,310			
Lombard	19,378	20,717	2,115	2,261	

Lake Zurich	7,904	10,214			
Archer	15,953	17,055	646	691	
Matteson	4,717	5,043			
North Aurora	19,675	21,035			
Oswego	15,941	17,043			
Prospect Heights	7,508	8,026			
West Chicago	8,217	8,784			
Emergency Work Orders	74,060	79,044	12,310	13,138	
Shorewood	22,597	24,118			
Bell Road	9,119	9,733			
McHenry	11,406	14,740			
Medical Center	2,221	2,370			
South Elgin	14,377	15,345			
Total	\$1,000,367	\$1,173,252	\$70,316	\$78,920	\$1,772,028
Report Reference	III-36	III-36	III-36	III-36	III-36
Calculation Reference	Appendix Three-G	Appendix Three-G	Appendix Three-G	Appendix Three-G	Appendix Three-I

The report reference indicates the pages in Chapter Three where the adjustment is discussed. The calculation reference indicates in which appendix more information on Liberty's calculation methods can be found.

It should be noted that Liberty's adjustments for excess overtime by ComEd employees are shown for illustrative purposes only. Liberty has recommended an adjustment based on all capitalized overtime during the January 1999 to June 30, 2001 period, which is discussed further in Chapter Three.

Northwest Project

Adjustment Summary

ComEd placed the Northwest project into service during 2000, and included in its proposed DST rate base a cost of \$22,722,530.¹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$3,432,121
Removal of excess ComEd hourly overtime	20,254
Removal of hourly employee-related costs/allocated OH	21,654
Removal of excess ComEd salaried overtime	2,480
Removal of salaried employee-related costs/allocated OH	2,651
Removal of excess ABB overtime	552,824
Removal of ABB expediting charges	402,905
Management/planning disallowance of 5%	914,369
Total	\$5,349,258

Background

The Northwest substation had three terminals. Terminal 2 consisted of older equipment from the 1950s that was located outdoors. Terminal 1 and Terminal 3 consisted of newer equipment that was housed indoors. The three terminals operated somewhat interdependently. The transformers at Terminals 1 and 3 shared buses with Terminal 2; this configuration created exposures for major problems because an adverse condition at one transformer could cause others to trip.²

An outage-causing fire took place at Terminal 2 in 1995 due to thermal degradation in the transformers. ComEd replaced the transformers damaged by the fire, and added 138kV inductors shortly thereafter. ComEd also understood at the time that it should replace the older switchgear at Terminal 2 soon. This situation at the substation became an issue of concern to the City after the fire, although ComEd as yet had made no firm agreements with the City to resolve it. During the period 1996-1999, the Company considered various alternatives for replacement of Terminal 2, but none led to firm plans.³ Reportedly, the usable area around Terminal 2 was very limited. ComEd considered several options, including rebuilding the switchgear on the existing site and building a new switch house on the west side of California Avenue.

¹ Figures were taken from DR 283 for project IDs K13999, T114NW, and FNKLNW, and from DR 447 for project ID T114TR. According to ComEd attendees at the interview of June 19, 2002, most of the work was completed by late May 2001, although not all 12.5kV switchgear had been cut over until the fall.

² According the documents pertaining to the evaluation of the ABB and GE proposals provided in DR 287, a T1/T3 trip de-energized the T2 transformer requiring manual isolation before the T2 transformer could be returned to service after the 1999 outages.

³ Interview #42-16.

ComEd included roughly \$4 million for Northwest improvements in its 1996 to 1998 budget. According to ComEd personnel, the Company was then just in the preliminary planning stages and still exploring alternatives, but inserted a budget placeholder in recognition of the fact that Terminal 2 switchgear work at Northwest represented a clear and reasonably current need. The Company formed a task force in 1998 to evaluate alternatives. The group considered a plan that would replace 30 MVA transformers with 40 MVA transformers and replace the switchgear with a “concept” building. The company estimated the cost of this plan to be \$6.3 million and the installation schedule to be two years. This latest option remained in the planning stages when the outages of 1999 occurred.

Action at Northwest became a priority project after the 1999 outages as part of ComEd’s Settlement Agreement with the City of Chicago. After those outages, ComEd put its plan on hold while GE and ABB examined available options, not just for Northwest, but on a system-wide basis. ABB submitted a proposal that significantly expanded the amount of work ComEd had planned for Northwest. ComEd chose ABB’s proposal in October 1999; the plan had a base cost for Northwest reinforcement under a turnkey contract of [REDACTED] million. The scope of the ABB proposal included the following:

- Replacement of 12.5kV switchgear at Terminal 2 (provided by ABB), building a structure on stilts above the existing switchgear, and installation of SCADA equipment.
- Replacement of two 30 MVA transformers with two 40 MVA transformers (provided by ABB) at Terminal 2.
- Installation of a fifth 75 MVA transformer (provided by ComEd) that would act as an in-service spare to backup the existing Terminal 1 and 3 transformers.
- Installation of a second transformer (provided by ComEd) at Finkl (a customer location) fed from a different 138kV line, which would allow ComEd to free up the four dedicated feeder lines that had been used as a backup.
- Addition of five positions to the 138kV ring bus with disconnects at each individual bus positions (equipment provided by ABB).
- Transferring 20 MVA to Diversey (through ComEd switching).

ComEd estimated the cost of this work at \$12.1 million, according to the Company’s preliminary project planning diagrams.⁴ Work on the Northwest project began in November 1999, with ABB as general contractor. ABB’s contractors included: Northwest Construction (civil work), CTI (project engineering), M.J. Electric⁵ (field electrical work), and Phoenix (switch board controls).

After work was underway for several months, ComEd performed in March 2000 an analysis of expected costs of the project, considering intervening work scope changes. ComEd brought in professional estimators at that time to examine the cost consequences of all the accumulated changes on the Chicago “Six-Pack” projects. It decided to address the accumulation of work

⁴ DR 479.

⁵ M.J. Electric is an affiliate of ComEd. A separate company owned by the same ultimate parent that owns ComEd purchased M.J. Electric in late 2000.

scope changes through one contract amendment.⁶ Subsequent ComEd documents indicate a substantial increase in the revised estimate to \$20.7 million, which approaches twice the Company's earlier estimates of costs under the ABB proposed design. ComEd's estimate was broken down as follows:

- [REDACTED]
- Proposed changes of \$2.194 million
 - \$1.851 million for Terminal 2 building changes
 - \$.150 million for expediting 138kV electrical equipment
 - \$.192 million for overheads and warranties to schedule changes
- Separate change orders yielding a credit of \$.5 million
- Additional ComEd costs of \$2.875 million, including ComEd installation of 138kV cables, installing SCADA, landscaping and fire protection/suppression.

A change in the switchgear building necessitated by building codes constituted the major component of the increase in ABB's portion of the work. ComEd did not know the requirements of the current code during the design process for Northwest.⁷ It had planned to make the elevated structure at Terminal 2 metal; however, code changes since ComEd last familiarized itself with requirements included fire protection and suppression regulations that would dictate a more expensive pre-cast, steel-reinforced concrete structure. Construction had not yet begun on the structure, so ComEd did not incur any costs resulting from the design change, and it is clear that the more expensive structure was necessary. The more telling question concerns ComEd's lack of knowledge about the currently applicable requirements. ComEd project management failed to exercise reasonable care in assuring that the original design complied with applicable and known public requirements.

Project Management and Planning Issues

The rushed and compressed nature of the planning, estimating, contracting, and construction process for the Northwest substation project (as well as for the Diversey, Ohio Ring Bus and Kingsbury projects) caused work scope changes and cost increases. A normal planning and construction cycle, as well as better project planning, would have yielded significantly lower costs for this project. Liberty believes that the cost could have been as much as 10 percent lower, but conservatively recommends a disallowance of five percent. A five percent disallowance on the cost under the project IDs included in the distribution rate case, less the other labor-oriented adjustments, totals \$914,369 for Northwest.⁸

⁶ There were actually three amendments to the ABB contract. The first clarified the safety-related incentives. The second dealt with scope changes, and the third allowed for ComEd's electrical personnel to take on some of the work originally slated for contractors.

⁷ Interview #42-16. ComEd attendees stated that the Company had the onus of procuring the necessary permits, and did not fault ABB for not being aware of such issues. ABB didn't look at the codes, and neither did ComEd.

⁸ Liberty's recommended adjustments totaled \$4,435,149, which, when subtracted from the \$22,722,530 rate base claim, yields \$18,287,381. Five percent of this revised total is \$914,369.

Project Costs

The following table summarizes the costs of the Northwest project by major category as of December 31, 2000.⁹

Northwest Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$93,935
Hourly - Premium Time	83,169
Salaried - Regular Time	219,114
Salaried - Premium Time	44,786
Materials	637,404
Services/Contractors	20,438,401
Other	621,908
AFUDC, etc	72,547
Overheads	337,812
Employee Overhead Costs	173,454
Subtotal	\$ 22,722,530
Adjust. per ComEd Testimony	(1,014,000)
First Revised Total	\$21,708,530
Additional Adjust. Per DR 666	(2,418,121)
Final Total	\$19,290,409

ComEd identified that \$2,418,121 in charges associated with the gas-insulated switchgear originally purchased from ABB for Lakeview were incorrectly applied to the Northwest project.¹⁰ Liberty proposes a downward adjustment of \$2,418,121 to remove these costs from proposed rate base. During the proceedings, ComEd acknowledged that it incorrectly included \$1,014,000 in the Northwest project, and agreed to make an adjustment. According to ComEd, it had identified some design drawing costs related to the State project that it incorrectly charged to projects in service, including Northwest.¹¹

⁹ DR 507. Figures represent balance in account 106 as of December 31, 2000. Additional work of approximately \$1 million at Northwest for landscaping and additional fire protection was completed during 2002 and not included in proposed rate base.

¹⁰ DR 666. Lakeview costs were not included in proposed distribution rate base.

¹¹ See Surrebuttal Testimony of Philip E. Voltz (Exhibit 46.0), p. 3.

ComEd Employee Overtime

The amount of ComEd overtime used on the project was high, at roughly 37 percent for craft and 12 percent for salaried personnel. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$20,254 and \$2,480, respectively.¹² An adjustment must also be made to employee-related costs (pension, benefits, and payroll taxes) and allocated overhead, which are both allocated to capital projects based on Company labor. ComEd's allocation factors for benefits and overhead differed each year, and Liberty applied the factors relevant for the year in which the labor expenses were recorded.¹³ The concomitant adjustments for benefits and overhead for the \$20,254 and \$2,480 adjustments are \$21,914 and \$2,651, respectively.

ABB Contract Overtime and Expediting

According to invoice information provided to Liberty, ComEd paid ABB \$20,628,751 as of the end of 2000.¹⁴ Overtime by ABB's contractors on the Northwest project, M.J. Electric/Hyre Electric and Northwest Contractors, was approximately 45 percent and 25 percent, respectively. Liberty has calculated adjustments to the cost of the ABB contract for excess contractor overtime and for expediting charges contained in the prices paid under the ABB contract, as discussed more fully elsewhere in this chapter. For Northwest, Liberty identified \$552,824 in excess overtime charges, and \$402,905 in expediting charges.¹⁵

Contractor Overtime

Several large contractors other than ABB worked on the Northwest project. ComEd paid the following amounts to major contractors:¹⁶

Major Contractors on Northwest Project

Contractor	Payments through Feb. 28, 2001
Genex	\$208,938
Patrick Engineering	\$101,447
Pirelli Cable and Systems	\$961,331

¹² Liberty's method to calculate overtime adjustments, including employee-related costs and allocated overhead, is discussed elsewhere in this report. Note that allocated overhead is not the same as Overhead reflected in the project cost summary above, which includes injuries, administrative and legal costs, other overhead costs, and direct cost adjustments (used to transfer pre-1998 costs to CBMS that could not be otherwise categorized).

¹³ As shown in Appendix Three-F, the percentage factors for employee benefits and allocated overhead varied considerably over the 1998-2001 period. Liberty calculated the employee benefit and overhead adjustments based on the amount of overtime in each year. Thus, the weighted average allocation factors will differ for each project depending upon when the overtime was recorded.

¹⁴ DR 567.

¹⁵ Liberty's method to calculate overtime and expediting charge adjustments for projects under the ABB contract is discussed elsewhere in this chapter.

¹⁶ DR 567.

Liberty recommends disallowance of contractor overtime in excess of 20 percent. However, ComEd was unable to provide useable manpower information on these contractors, and Liberty was unable to calculate any necessary adjustments.¹⁷

According to ComEd, the Company also had a firm price contract with McDaniels Fire Systems for fire protection systems and a contract based on rate schedules with Belding Walbridge for heaving hauling. ComEd paid these two contractors approximately \$0.5 million. ComEd provided manpower information for McDaniels, which indicated no excess overtime by that contractor.¹⁸

¹⁷ DR 567.

¹⁸ DR 796.

Diversey Substation Project

Adjustment Summary

ComEd placed the Diversey project into service in June 2000, and included in its proposed DST rate base a cost of \$47,995,884.¹⁹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$76,914
Removal of hourly employee-related costs/allocated OH	88,395
Removal of excess ABB overtime	421,446
Removal of ABB expediting charges	837,406
Removal of excess contractor overtime - Cicero	2,878
Removal of excess contractor costs – WA Chester	45,080
Management/planning disallowance of 5%	2,326,188
Total	\$3,798,307

Background

ComEd completed the Diversey substation project, located at a new Chicago site, as part of the “Six-Pack” of projects approved by ComEd in late 1999. Diversey represented a key portion in ABB’s recommended plan, as well as the Company’s System Optimization Plan, to improve distribution reliability in the City.²⁰

ComEd initially envisioned Diversey as the eventual replacement for the aging Lakeview substation, which is north of downtown Chicago and which ComEd placed in service in 1950.²¹ In a review of ComEd’s “Project Justification” dated July 25, 1997, ComEd distribution planners proposed the acquisition of a site for Diversey for an estimated cost of \$3.5 million. The review estimated the planning date, or date ComEd’s system required the completed substation, as June 2005. A 1997 estimate placed the total cost of the Diversey project, which included four 50 MVA, 138-12.5kV transformers and two 138kV transmission lines, at \$27.08 million in 2005 dollars.²²

Liberty found no additional, pre-1999 planning or approval documents in the ComEd Diversey files. The 1999 to 2001 ComEd capital budget included a Diversey line item for \$4.0 million in

¹⁹ Exhibit WPB 2.1a indicates that the in-service value for the two Diversey projects totaled \$47,995,884 (Project ID T40FDR at \$8,355,914 and project ID T40TR4 at \$39,639,970). The AFUDC adjustment was taken from Exhibit WPB 2.1a.

²⁰ DR 82.

²¹ Interview #42-2.

²² DR 101, Bates numbers AG0004067-75.

2000.²³ ComEd stated, however, that this entry does not reflect approval of anything more than the site acquisition; *i.e.*, it was not an authorization to complete the entire project. ComEd also said that it did not revise or accelerate the planning date for Diversey prior to the 1999 Chicago outages.²⁴

After the August 1999 outages, the Diversey project became an immediate priority for ComEd. ABB's October 1999 report recommended that ComEd build Diversey immediately, *i.e.*, by June 2000, with a 138kV ring bus. Diversey represented one of the six major projects recommended for "Year One" of the ABB system optimization plan. ABB recommended other major projects through 2004. In effect, ComEd committed to accelerate Diversey's in-service date from 2005 to 2000, which left only about 6 months to plan and complete the project.²⁵

ComEd assembled teams to expeditiously design and estimate the projects that it designated were required to improve reliability before the 2000 system peak. Each team included an assigned project manager, substation designer, distribution planner, and construction representative. The teams visited the sites and prepared project diagrams and project estimates.²⁶

The ABB November 3, 1999, turnkey arrangement for Diversey set a "Firm Base Price" of [REDACTED] million plus a "Maximum Possible Performance Incentive" of [REDACTED].²⁷ The Diversey project manager stated that ComEd people did not have the resources to construct Diversey in the six-month period allotted. The Company required contractors if they were to meet the June 2000 requirement dates of the projects. According to ComEd, ABB was the only company able to provide all equipment and services needed for the projects in the time period required.²⁸

The justification for the project dated November 30, 1999 stated the following:²⁹

Diversey TSS is required to provide additional capacity in the area approximately bounded by Irving Park Road on the north, Sacramento Avenue on the west, Division Street on the south, and Lake Michigan on the east. This area is now being served by the following substations: Northwest TSS 114, Lakeview TSS 35, Clybourn TSS 54, and Crosby TSS 82. Summer 1999 overloads were seen at these stations of 14% at Northwest Terminal 1, 6% at Northwest Terminal 2, 6% at Lakeview, and 16% at Crosby. Several other projects are being undertaken at Northwest and Crosby to provide for capacity increases for summer 2000 at those substations, with load transfers to balance the loading. With all [of] these projects completed [expected by the summer of 2000], the only remaining overload is 4% at Lakeview. However, all of the adjacent substations are loaded at 93% to 99% of their allowable loading. The addition of the Diversey TSS will provide relief to

²³ DR 22, Bates number A0008596.

²⁴ Interview #42-21.

²⁵ DR 82.

²⁶ Interview #42-21.

²⁷ DR 24.

²⁸ Interview #42-2.

²⁹ DR 101, Bates number A0007715.

this area, eliminating all overloads, providing for operating flexibility, and increase the margins at substations. [additions made for clarity]

ComEd approved the preliminary project diagram for Diversey on November 30, 1999, with an estimate of \$42.0 million that consisted of four project IDs (one each for the substation, site, 138kV transmission tap, and feeders). ABB's 1999 proposal served as a significant factor in deriving this estimate. ComEd stated that similar estimates also came from internal sources. The project diagram estimate included:

- \$21.0 million for the substation, which came from ComEd's substation group, protection department, and structural group
- \$4.0 million for transmission line connections into the 138kV system
- \$8.0 million for the purchase of real estate
- \$9.0 million for feeder connections.

The ComEd CFO stated that a group of projects, including Diversey, were "heightened" in importance late in 1999, which led to project approvals by executive management and the Board of Directors in a special process that fell outside normal capital budgeting activities.³⁰

The purchase of a site for Diversey took three stages to complete. In 1996-97, ComEd pursued a 3.5-acre industrial-area site at Paulina and Diversey, but the owner proved unwilling to sell. In 1999, the company selected a second site in a more commercial area. This site would have cost approximately \$4.0 million, the amount budgeted in the year 2000. ComEd did not purchase this second site, but instead purchased a larger parcel of land that included the second site. According to ComEd, the budgeted site would have been difficult due to adjacent commercial buildings.³¹

ABB's contract price with full incentives was [REDACTED] for the substation equipment and services. ComEd represented that the final cost for the substation piece alone, estimated at [REDACTED] million, was [REDACTED] million. Also according to ComEd, the reason for this large difference was that the original estimate included only ABB's portion of the work, and excluded the work that ComEd would be required to do on the project. In addition, the original, approved estimate did not include relays, SCADA, communications equipment, or landscaping. ComEd's explanation for these omissions from the project estimate was that, in November 1999, ComEd knew the cost for ABB's work, but did not know or attempt to estimate the other project costs that ComEd would be responsible for incurring.³²

At some point in time between the approval of the Diversey project in November 1999 and March 2000, the project estimate changed from \$42.0 million to \$49.1 million. ComEd was not able to document the components or breakdown of this \$7.1 million change, nor could ComEd personnel interviewed by Liberty identify reasons for this cost change.³³

According to an ABB project progress report dated January 10, 2000, construction on the project began to fall significantly behind schedule shortly after work began:³⁴

³⁰ Interview #32.

³¹ Interview #58.

³² Interview #58.

³³ Interview #58.

³⁴ DR 101, Box 7B6, Bates number A0060678.

Construction was scheduled to commence in mid-December and ComEd experienced delays in obtaining title to the property, relocating existing tenants, demolition work, and soils data and is in the process of obtaining the building permit. ... Construction will commence approximately one month later than necessary to meet the May 20 commitment. ... Additional efforts and costs to meet the May 20 date will be calculated upon receipt of permits and conformed design.

The next ABB progress report noted that construction was pushed back six weeks from the original schedule. In the February 22, 2000, report, ABB presented to ComEd a revised Diversey completion date of July 19, 2000, two months behind schedule. It recommended that the base contract be renegotiated as follows:³⁵

- New base price for each substation (including changes and additional expediting cost)
- Separate completion dates by work elements (noting an intent to recover as much of the permit-caused delay as possible)
- Tying incentives to new completion dates.

A March 11, 2000, document titled “The Proposed Changes to the ABB/City of Chicago Project” outlined the proposed cost additions to the June 2000 City of Chicago substation projects, which included Diversey. The document indicated a revised Diversey cost estimate of \$63.2 million. A later cost revision for Diversey dated July 14, 2000, increased the project budget again to \$68.3 million.

The March 11 increase amounted to \$8.913 million, which included:

- Building scope changes for \$6.525 million
- Changes to 138kV electrical equipment of \$586,500
- Expediting charges of \$675,000.

ComEd stated that the Chicago building code dictated the building changes. ABB’s original proposal assumed a pre-assembled power distribution center installed on top of a concrete cable vault basement. The revised design included an engineered, structural frame, two-story steel building with pre-cast concrete wall panels and walls for inductors and capacitors. The revised building also required a heavier foundation to accommodate the extra equipment requested by ComEd. The changes to the 138kV electrical equipment resulted from a reconfiguration of the 138kV ring. This design change came after execution of the ABB contract. ABB had based its estimate on a single 138kV ring. The split rings that ComEd added would provide for consistency with the rest of the ComEd system and for increased reliability.³⁶

ComEd project management stated that building and fire codes had changed in the City of Chicago since the early 1990s. ComEd had not built a new substation in the City since the

³⁵ DR 505, Bates number A0060691.

³⁶ Interview #58.

Ontario substation completed in 1992; it did not keep up with the building codes changes. ABB was also unaware of the code, as it had never built a utility project in Chicago.³⁷

The expediting charges, according to ComEd, included extra ABB overtime. Due to outage constraints, ComEd required earlier completion of the 138kV yard. In addition, ComEd stated that ABB had not known that Diversey work would affect work at the Northwest substation.³⁸

Other ABB work scope changes included the installation of inductors and capacitors, additional 12kV circuit breakers, and the addition of a roof over the transformers, all of which added about \$2.8 million to ABB's price. Mitigating these increases were transfers of cabling scope and excavation work from ABB to ComEd, which reduced the ABB estimate by \$1.7 million.³⁹

The later, July increase to the project estimate increased the ABB portion by an additional \$1.2 million. Combined, the May and July increases brought the estimate to about \$11.1 million over the originally contracted ABB maximum price.

ComEd's portion of the Diversey work also expanded in this period. These increases included a \$6.9 million increase for additional contracted craft and professional staff augmentation work for Diversey and \$1.0 million for contingency on several items within ComEd's scope. According to the ComEd project manager, most of the \$6.9 million increase consisted of:⁴⁰

- \$2.3 million for increases in the contractor duct work pricing
- \$2.75 million for 12kV feeder cut-overs
- \$1.7 million additional for the perimeter wall (from \$300,000 to \$2.0 million) around the 138kV switchyard.

Overall, the Diversey project budget increased from the original \$42.0 million to the July 2000 budget of \$68.3 million, a total increase of 62.6 percent.

Costs for the Diversey project were captured under four distinct project IDs in CBMS. ComEd included only two of the four project IDs (which encompassed the substation and feeder portions of the work) in its proposed DST rate base. ComEd noted that it included the project ID containing the tie to the 138kV supply system in Accounts 357004 and 358004, which, as transmission accounts, did not fall within distribution rate base. The fourth project ID covered the substation site. ComEd included site costs of \$6.98 million in 2001 plant additions, listing an in-service date of August 1, 2001.⁴¹ However ComEd did not include these costs in its 2001 pro forma additions to the distribution rate base.⁴²

Project Management and Planning Issues

The Diversey project demonstrates the weaknesses in ComEd's planning, estimating, controls and project management in a period of compressed schedules. Liberty's inquiries into the reasons

³⁷ Interview #58.

³⁸ Interview #58.

³⁹ DR 436.

⁴⁰ Interview #58.

⁴¹ DR 457, page 17.

⁴² E-mail from Frank Richardson dated 8/27/2002.

for scope and budget changes on the Diversey project revealed several troubling occurrences. According to ComEd, the original budget approved by senior management and the Board of Directors did not include several key components of an electrical substation, such as inductors, capacitors, relays, a SCADA system, or communications equipment. ComEd stated that the company “neglected” to estimate the ComEd construction responsibilities on the project in the original approved budget.

ComEd rushed to acquire the substation site in just a few weeks; such a time frame could not allow the bargaining strength of a better-paced course of action. ComEd could not explain, and had no record of, why the Diversey project budget increased from \$42.0 to \$49.1 million in early 2000. In addition, significant work scope changes to the design for the Diversey building added \$6.5 to \$7 million to the ABB contract price. It is almost inconceivable that ComEd could permit its knowledge of applicable building requirements in the City of Chicago to reach such a state of staleness. A prudent and reasonable project management function would have known them, and factored them into original planning, estimates, and negotiations with ABB. It is very disruptive for basic design changes to take place after construction management has set its work plans and marshaled its resources. ComEd apparently caused the project schedule to fall behind by almost two months, according to ABB reports, before the contract was significantly renegotiated in Amendment 2. Finally, ComEd added about \$8 million of changes to the portion of the work scope and cost under its own project responsibility.

The rushed, compressed nature of the planning, estimating, contracting, and construction processes for Diversey (6 months vs. 18-24 months under normal circumstances) caused numerous work scope changes and cost increases. However, only the ABB expediting charge of \$675,000 clearly and specifically appears as an unallowable expenditure. A normal planning and construction cycle, as well as better project planning, would have undoubtedly yielded significantly lower cost for this project. Liberty believes that the cost could have been as much as 10 percent lower (not counting the effects of excess overtime), but conservatively recommends a disallowance of five percent. A five percent disallowance on the cost under the two project IDs included in the distribution rate case, less the other labor-oriented adjustments, totals \$2,326,188 for Diversey.⁴³

Project Costs

The following table summarizes the costs of the Diversey project by major category as of February 28, 2001.⁴⁴

Diversey Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$312,845
Hourly - Premium Time	308,520

⁴³ Liberty’s recommended adjustments totaled \$1,472,119, which, when subtracted from the \$47,995,889 rate base claim, yields \$46,523,765. Five percent of this revised total is \$2,326,188.

⁴⁴ DR 507. Figures represent balance in account 107 as of February 28, 2001, plus AFUDC adjustment reflected in Exhibit WPB 2.1a.

Salaried - Regular Time	411,198
Salaried - Premium Time	73,138
Materials	2,647,949
Services/Contractors	42,032,103
Other	1,382,208
AFUDC, etc	3,113,939
Overheads	771,681
Employee Overhead Costs	397,589
Subtotal	\$50,451,170
AFUDC Adjustment	(2,455,287)
Final Total	\$47,995,884

ComEd Employee Overtime

ComEd used extremely high overtime rates on Diversey. ComEd craft overtime was roughly 40 percent, while salaried overtime was at acceptable levels of about 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the correction to craft labor expense would be \$76,914.⁴⁵ An adjustment must also be made to employee-related costs (pension, benefits, and payroll taxes) and allocated overhead, which are both allocated to capital projects based on Company labor. ComEd's allocation factors for benefits and overhead differed each year, and Liberty applied the factors relevant for the year in which the labor expenses were recorded.⁴⁶ The concomitant adjustment for benefits and overhead for the \$76,914 adjustment is \$88,395.

ABB Contract Overtime and Expediting

According to invoice information provided to Liberty, ComEd paid ABB \$31,331,262 as of the end of February, 2001.⁴⁷ Liberty calculated adjustments to the cost of the ABB contract for excess contractor overtime and for expediting charges contained in the prices paid under the

⁴⁵ Liberty's method to calculate overtime adjustments, including employee-related costs and allocated overhead, is discussed elsewhere in this report. Note that allocated overhead is not the same as Overhead reflected in the project cost summary above, which includes injuries, administrative and legal costs, other overhead costs, and direct cost adjustments (used to transfer pre-1998 costs to CBMS that could not be otherwise categorized).

⁴⁶ As shown in Appendix Three-F, the percentage factors for employee benefits and allocated overhead varied considerably over the 1998-2001 period. Liberty calculated the employee benefit and overhead adjustments based on the amount of overtime in each year. Thus, the weighted average allocation factors will differ for each project depending upon when the overtime was recorded.

⁴⁷ DR 567.

ABB contract, which is discussed more fully elsewhere in this chapter. For Diversey, Liberty identified \$421,446 in excess overtime charges, and \$837,406 in expediting charges.⁴⁸

Contractor Overtime

ComEd also made significant use of contractors other than ABB. ComEd reported the following amounts paid to major contractors.⁴⁹

Major Contractors on Diversey Project

Contractor	Payments through February 28, 2001
Aldridge Electric	\$203,701
Kenney Construction	\$7,686,401
Cicero Electric	\$177,430
Genex	\$210,795
Northwest Contractors	\$1,789,150
Patrick Engineering	\$573,400
Pirelli Cable and Systems	\$765,245

As discussed elsewhere, Liberty recommended disallowance of contractor overtime in excess of 20 percent. ComEd provided some limited manpower information for a few of these contractors, but not all. Based on the information provided, Liberty was able to determine that no excess overtime was used by Kenney or Northwest Contractors. Cicero Electric did have a modest amount of excess overtime, and Liberty has calculated a downward adjustment of \$2,878 to remove this excess overtime.⁵⁰ No useable information was provided on the other contractors listed above; therefore, Liberty was unable to calculate any other adjustments. ComEd did provide manpower information on W.A. Chester, but no invoice information. Liberty has therefore assumed that W.A. Chester was an electrical subcontractor for one of these other contractors, and has calculated an adjustment of \$45,080 based on estimated labor rates.⁵¹

ComEd also indicated that it had firm price contracts with Pirelli Cable, for underground cable installation, and with McDaniel Fire Systems, for fire systems. Payments to these two contractors totaled approximately \$1.0 million. According to information provided by ComEd, there was no excess overtime by these contractors.⁵²

⁴⁸ Liberty's method to calculate overtime and expediting charge adjustments for projects under the ABB contract is discussed in elsewhere in this chapter.

⁴⁹ DR 567.

⁵⁰ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours, and [REDACTED] double time hours were used by Cicero Electric.

⁵¹ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours, and [REDACTED] double time hours were used by W.A. Chester, an electrical contractor.

⁵² DR 796.

Ohio Ring Bus

Adjustment Summary

ComEd placed the Ohio Ring Bus project in service during June 2000, and included in its proposed DST rate base a cost of \$56,391,983.⁵³ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual cost incurred through 6/30/01	\$(76,339)
Removal of excess ComEd hourly overtime	13,847
Removal of hourly employee-related costs/allocated OH	15,393
Removal of excess ComEd salaried overtime	7,556
Removal of salaried employee-related costs/allocated OH	7,584
Removal of excess ABB overtime	216,908
Removal of ABB expediting charges	722,735
Removal of excess contractor costs – WA Chester	153,435
Management/planning disallowance of 5%	2,766,543
Total	\$3,827,662

Background

The Ohio Ring Bus project (also referred to as Kingsbury/Ohio) included the construction of two 138kV ring busses for existing ComEd substations at Kingsbury TSS 34 and Ohio TSS 65 on the northwest edge of downtown Chicago. The ring busses comprise one of three major projects that ComEd planned at this key substation site following the outages in August 1999. The ring busses formed one of the key projects of the first year of ABB's recommended plan to improve distribution reliability in the City of Chicago.

The Kingsbury and Ohio substation sites lie in the same city block, separated by an alley. The substations adjoin. ComEd had not electrically connected them, but fed each from separate supply sources. The radial supply feeds to the two substations caused reliability concerns, as did the condition of the stations, especially Ohio, which is subjected to roadway salt.⁵⁴ The earliest planning documents or project spending authorizations for the ring busses that Liberty found had a vintage of late 1999. ABB's October 1999 system optimization plan for a looped 138kV distribution system in Chicago included immediately building ring busses at the Kingsbury and Ohio substations. ABB proposed in-service dates of June 2000 for Ohio and Kingsbury ring

⁵³ Exhibit WPB 2.1a indicates that the in-service value for one portion of the project, net of AFUDC adjustment, was \$38,324,692; Exhibit WPB 2.2b indicates that the estimated value at completion of the other portion of the project was \$18,067,291.

⁵⁴ Interview #42-8.

busses, followed by a Kingsbury substation rebuild in 2001 and an Ohio substation rebuild by 2004.⁵⁵

ComEd assigned teams to design and estimate costs for the projects required to improve ComEd's reliability before the 2000 system peak. Each team included an assigned project manager, substation designer, distribution planner, and construction representative. The teams visited the sites and prepared project diagrams and estimates. ComEd planners estimated the cost of the Kingsbury and Ohio ring busses at \$15.0 million each in December 1999.⁵⁶ The project description was as follows:⁵⁷

TSS-34 Kingsbury and TSS-65 Ohio: Install 138kV switchgear, ring bus configuration with 8 – circuit breakers, 24 motor operated disconnects, 32 ground switches and 8 – bus sections at each station. Switchgear to be operated at 69kV.

The Ohio ring bus projects formed part of the “Turnkey Chicago Substation Projects” contract of November 3, 1999. ABB committed to build the ring busses on a turnkey basis for a “Firm Base Price” of [REDACTED] million, plus a “Maximum Possible Performance Incentive” of [REDACTED] million.⁵⁸ The maximum ABB contract payments of [REDACTED] million greatly exceed ComEd's estimated total cost of the project (\$30 million), which was approved well after the contract was executed.

Liberty questioned ComEd's planners about why their “Program Justification” indicated an estimated project cost of \$30 million (\$15 million for project ID KINGTX and [REDACTED] million for project ID OHIOTX), when they had created the estimate after a contract was signed with ABB for [REDACTED] million. ComEd responded that the Program Justification was based on the earlier ABB Proposal (prior to the contract), which had included a base of [REDACTED] million and an incentive of [REDACTED] million. This Program Justification estimate also did not include ComEd's work – SCADA, 138kV line connections, cabling and relays.⁵⁹

According to the ComEd CFO, a group of projects, including the ring bus project, became “heightened” in importance in late 1999, after which executive management and the Board of Directors approved them in a special process outside routine capital budgeting activities.⁶⁰ ComEd could not provide the actual documents approving these projects and the dollar amounts for each. The approved December planning document provides one potential reference point for dollar amounts approved, \$30 million; the maximum base price for the ABB contract provides another, [REDACTED]. The amount apparently authorized by the Senior Management Committee (“SMC”) on April 30, 2000, \$37.151 million provides yet another.⁶¹ ComEd measured eventual approved project cost changes from \$37.151 million; Liberty took this same reference point for

⁵⁵ DR 82, page 26.

⁵⁶ DR 101, Bates number A0007741.

⁵⁷ DR 101, Bates number A0007741.

⁵⁸ DR 24, ABB contract.

⁵⁹ Interview #58.

⁶⁰ Interview #32.

⁶¹ DR 101.

measuring changes. However, ComEd was unable to explain or provide any documentation regarding the increase from \$30.0 million to \$37.1 million.⁶²

ComEd's senior management approved \$18.950 million of project changes and cost increases to the Ohio ring bus project (above the \$37.1 million level) on July 19, 2000. The components of the changes are as follows:⁶³

- ABB Base and Fixed Price Contract (): Addition of 138kV protection and control, building design change to engineered 2-story structure, addition of provide/install disconnect switches and termination modifications and expediting charges.
- ABB Contract Incentives (): Same reasons as above
- ComEd Labor (\$0.711 million): Additional testing, project management, addition of relay upgrades.
- Contractor Labor and Services (\$3.820 million): Addition of cable and conduit installation, demolition and excavation, SCADA and landscaping and fencing.
- Materials (\$2.3 million): Addition of cable, 69 to 138 kV conversion, new caps and SCADA.
- Other Direct Costs and Overheads (\$0.52 million): Previously omitted in estimates.
- Previously omitted (\$0.5 million); potential pricing errors for Ohio cable and 69 to 138kV conversion, and potential to replace bad cable during conversion.

ComEd made two major amendments to the original ABB contract for the Kingsbury/Ohio ring bus. First, Amendment 2 to the ABB contract caused a net increase of \$6.091 million for changes in the ABB scope.⁶⁴ Changes to the substation building increased the budget by \$6.022 million, and expediting charges added \$570,000.⁶⁵ The addition of 138kV protection and control and disconnect switches made up the rest of the ABB base price change of \$8.084 million.

ComEd project management reported that changes to scope involved building design. The same changes to the City of Chicago building code discussed under the Diversey project underlay the need for the changes on this project. In late December 1999, ComEd learned that in order to be in compliance with the building code and meet the fire rating, it would have to construct concrete buildings, rather than the steel buildings it and ABB had originally planned.⁶⁶

ComEd said that the changes to building designs did not require the Company to replace or repeat any work, because it had not begun construction of the steel buildings before the need for the change was recognized. The changes did, however, affect the schedule. Before ABB could begin working on the new buildings, ComEd had to secure foundation permits. For the Kingsbury/Ohio site, the Company needed permits for the entire building. ABB subsequently provided ComEd with a quote for the changes to project scope.⁶⁷

According to an ABB project report dated February 7, 2000:⁶⁸

⁶² Interview #42-8.

⁶³ DR 506.

⁶⁴ DR 506.

⁶⁵ DR 101, Bates number A0007767.

⁶⁶ Interview #58.

⁶⁷ Interview #58.

⁶⁸ DR 505.

The soils report was issued by ComEd on 1/27/2000, approximately six weeks later than required by the baseline schedule. ... These delays have made it impossible to [sic] ABB to construct the building in time to receive main equipment and to meet the contract completion of May 20.

Due to the increased time required to construct the buildings, along with early permitting delays caused by ComEd, the scheduled completion date for the Ohio project changed from May 20 to July 25, according to the ABB document. In Amendment 2 to the ABB contract, the parties split the projects into several milestones. ABB and ComEd renegotiated the base price and the incentive payments on the basis of a base price for each milestone. As part of Amendment 2, ComEd also removed the transmission cable work for the all of the substation projects from ABB's scope, and assumed responsibility for this work.

ComEd also increased the project budget significantly due to the omission of several items, which ComEd would perform, from the original budget. These "previously omitted" items included project management, testing, relays, cable, SCADA, fire protection and overheads. These approved ComEd budget changes added \$8.9 million to the project budget.

Project Management and Planning Issues

ComEd did not appear to have seriously considered the Ohio Ring Bus as a defined system optimization project before 1999. Liberty found no earlier documents proposing the ring bus in ComEd's planning files. The ring bus project emerged as a key and immediate project in ABB's System Optimization recommendations in a document dated October 28, 1999.⁶⁹ ComEd adopted the project in its own System Optimization Plan shortly thereafter.

Numerous scope and budget changes resulted from poor estimating, controls, and project management. ComEd's original, approved project estimate did not include any of ComEd's work responsibilities, which included major items such as SCADA, 138kV line connections, cabling and relays. ComEd could not explain or provide any documentation regarding the increase in the project budget from \$30.0 million to \$37.1 million in early 2000.

Permitting delays and ignorance of current building code requirements caused the scheduled completion date for the Ohio project to change from May 20 to July 25. In addition, significant work scope changes to the design for the Ohio building added over \$6 million to the ABB contract price. ComEd should have known the building requirements in the City of Chicago and factored them into original plans and estimates.

The rushed and compressed nature of the planning, estimating, contracting, and construction processes for Ohio (6 months as opposed to 18 months to two years) caused numerous work scope changes and cost increases. A normal planning and construction cycle, as well as better project planning for this project would have undoubtedly resulted in a lower cost. Liberty believes that the cost could have been as much as 10 percent lower, but recommends a

⁶⁹ DR 82.

disallowance of five percent. A five percent disallowance on the cost under the two project IDs included in the distribution rate case, less the other labor-oriented adjustments, totals \$2,766,543.⁷⁰

Project Costs

The following table summarizes the costs of the Ohio Ring Bus project by major category.⁷¹

Ohio Ring Bus Project Costs

Cost Category	Amount
Hourly - Regular Time	\$113,392
Hourly - Premium Time	65,055
Salaried - Regular Time	312,246
Salaried - Premium Time	77,229
Materials	1,063,241
Services/Contractors	51,021,726
Other	581,621
AFUDC, etc	3,464,917
Overheads	565,237
Employee Overhead Costs	264,025
Subtotal	\$57,528,690
AFUDC Adjustment	(1,060,365)
Final Total	\$56,468,325

ComEd used an estimated cost at completion for the purposes of preparing its filing. As discussed elsewhere in this chapter, for those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be the proper basis for determining the amounts eligible for inclusion in distribution rate base. Liberty therefore recommends an upward adjustment of \$76,339.⁷²

⁷⁰ Liberty's recommended adjustments totaled \$1,061,119, which, when subtracted from the \$56,391,983 rate base claim, yields \$55,330,864. Five percent of this revised total is \$2,766,543.

⁷¹ DR 507. Figures represent balance in account 107 as of February 28, 2001, plus AFUDC adjustment reflected in Exhibit WPB 2.1a for project ID OHIOTX and balance in account 106 as of June 30, 2001 for project ID OHIORB.

⁷² This adjustment is consistent with the adjustment proposed by Staff and adopted by the Commission for project ID KINGTX. See Interim Order p. 44, and Staff Data Request GEG 1.01.

ComEd Employee Overtime

The amount of ComEd overtime used on the Ohio Ring Bus project was above levels that Liberty considers appropriate. Craft overtime was roughly 28 percent and salaried overtime was 14 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$13,847 and \$7,556, respectively.⁷³ An adjustment must also be made to employee-related costs (pension, benefits, and payroll taxes) and allocated overhead, which are both allocated to capital projects based on Company labor. ComEd's allocation factors for benefits and overhead differed each year, and Liberty applied the factors relevant for the year in which the labor expenses were recorded.⁷⁴ The concomitant adjustments for benefits and overhead for the \$13,847 and \$7,556 adjustments are \$15,393 and \$7,584, respectively.

ABB Contract Overtime and Expediting

According to invoice information provided to Liberty, ComEd paid ABB \$48,766,866 as of the end of February, 2001.⁷⁵ Liberty calculated adjustments to the cost of the ABB contract for excess contractor overtime and for expediting charges contained in the prices paid under the ABB contract, which is discussed more fully elsewhere in this chapter. For the Ohio Ring Bus project, Liberty identified \$216,908 in excess overtime charges, and \$722,735 in expediting charges.⁷⁶

Contractor Overtime

ComEd also used a significant number of contractors other than ABB on the Ohio Ring Bus project. Major contractors received the following amounts:⁷⁷

Major Contractors on Ohio Ring Bus Project

Contractor	Payments through February 28, 2001
W.A. Chester	\$1,307,877
Genex	\$208,779
Patrick Engineering	\$107,791

⁷³ Liberty's method to calculate overtime adjustments, including employee-related costs and allocated overhead, is discussed elsewhere in this chapter.

⁷⁴ As shown in Appendix Three-F, the percentage factors for employee benefits and allocated overhead varied considerably over the 1998-2001 period. Liberty calculated the employee benefit and overhead adjustments based on the amount of overtime in each year. Thus, the weighted average allocation factors will differ for each project depending upon when the overtime was recorded.

⁷⁵ DR 567.

⁷⁶ Liberty's method to calculate overtime and expediting charge adjustments for projects under the ABB contract is discussed elsewhere in this chapter.

⁷⁷ DR 567.

As discussed earlier in this chapter, Liberty recommends disallowance of contractor overtime in excess of 20 percent. ComEd provided some limited manpower information for W.A. Chester, but not the others. Based on the information provided, Liberty was able to determine that there was excess overtime used by W.A. Chester, and Liberty has calculated a downward adjustment of \$153,435 to remove this excess overtime.⁷⁸

According to ComEd, McDaniels Fire Systems provided fire protection system work under a firm price contract and received payments totaling approximately \$0.4 million. ComEd provided manpower information for McDaniels, which indicated no excess overtime by that contractor.⁷⁹

⁷⁸ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours, and [REDACTED] double time hours were used by W. A. Chester.

⁷⁹ DR 796.

Kingsbury Substation Project

Adjustment Summary

ComEd placed the Kingsbury project in service during June 2000, and included in its proposed DST rate base a cost of \$66,098,820.⁸⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual cost incurred through 6/30/01	\$7,252,076
Removal of excess ComEd hourly overtime	56,724
Removal of hourly employee-related costs/allocated OH	92,688
Removal of excess contractor costs - Kenny	1,024,208
Management/planning disallowance of 5%	2,883,656
Total	\$11,309,352

Background

The Kingsbury TSS 34 project (also referred to as Kingsbury/Grand) involved the complete rebuild of an existing substation near downtown Chicago. The Kingsbury substation project comprises the second of three major projects at this key substation site, all of which ComEd made priorities following the outages in August 1999. The others are the Ohio Ring Bus completed in June 2000 and the new Ohio substation to be completed in 2004. The Kingsbury and Ohio substation sites sit on the same city block, separated by an alley. The substations adjoin, but ComEd did not previously connect them electrically, instead feeding them from separate power sources. ComEd fed Kingsbury from Crosby and Ohio from Jefferson. The substations' radial supply feeds, age, and condition raised reliability concerns.⁸¹ The October 23, 1991, Franchise Agreement with the City of Chicago identified "North Bank TDC" with four 50 MVA transformers as a future project. The purpose of North Bank, with a projected service date of 1999, was to allow retirement of the Kingsbury substation.⁸² The Kingsbury substation rebuild provides the same amount of substation capacity as the nominal North Bank project.

Liberty's review of ComEd's approved capital budgets from 1991-1999 did not reveal a Kingsbury rebuild or replacement project among the authorized projects in any of these years.⁸³ Similarly, a review of planning documents did not reveal consideration of the Kingsbury rebuild project prior to the creation a project diagram drawn in late 1998, and a related project cost estimate dated March 10, 1999. The estimated cost for the Kingsbury project at this time totaled

⁸⁰ Exhibit WPB 2.2b indicates that the estimated value at completion was \$66,098,820 for project IDs 109875, KINGSB, L3456F, and T34FDR.

⁸¹ Interview #42-8.

⁸² DR 681.

⁸³ DR 216.

\$28,560,000.⁸⁴ The 1998 arbitration hearings and the resultant 1999 Chicago Settlement Agreement between ComEd and the City served as an important impetus for the consideration of the Kingsbury project. The 1999 Settlement Agreement lists the Kingsbury substation as a project that ComEd was to complete by December 31, 2001.⁸⁵ The Kingsbury project as envisioned by the Chicago Settlement Agreement constituted part of a program to upgrade all Chicago substations to 138kV for reliability purposes.⁸⁶

While it considered Kingsbury a key reliability project, ComEd did not include the Kingsbury rebuild in its authorized capital projects for 1999-2001. ComEd prepared that capital project list in late 1998. Following the major outages in August 1999, ABB identified the Kingsbury rebuild as an important project for Chicago reliability. ABB targeted an in-service date for this project for the second year of its Optimization Plan (*i.e.*, by June 1, 2001).⁸⁷ ComEd prepared a revised project diagram, a project cost estimate of \$28.6 million, and an “Authorization Project Request” form for the same amount, dated March 15, 2000.⁸⁸ ComEd described the Kingsbury rebuild project as follows:⁸⁹

Replace four 25 MVA, 69-12.5kV transformers (1948 vintage) with four 50 MVA, 138-12.5kV transformers. Replace the 12.5kV switchgear (1959 vintage) with higher capacity equipment capable of supplying 22 additional feeders. Remove 69kV supply from Crosby TSS. Connect to two Jefferson TSS to Crosby TSS 138kV lines adjacent to Kingsbury TSS. ... This project is needed to prevent transformer overloads at the 69kV and 138kV substations that supply the 12.5 kV distribution system in the downtown Chicago area as well as enhance the flexibility of supply to customers in this area for summer 2001.

ComEd may have approved the Kingsbury rebuild project in March or April 2000, with a project start in the fall of 2000. The only Authorization Project Request form provided by ComEd indicated an estimated project cost of \$28.6 million.⁹⁰ According to ComEd project management, the approved budget for the project totaled \$70.0 million. When asked how the project increased from \$28.6 million to \$70 million, the project managers stated that the first estimate was a generic engineering estimate put together by the ComEd Planning. According to ComEd project management, the original estimate pre-dated most project work. In addition, the “System Optimization Plan” caused changes to the plans for Kingsbury. Specifically, once ComEd had installed the Ohio Ring Bus, the Company needed to put the Kingsbury substation in a new location. The \$70 million project estimate was specific to the Kingsbury site, which also included the Ohio substation and two ring busses. ComEd built Kingsbury vertically, on a small footprint. The added levels of construction made the project more expensive than what ComEd Planning had estimated.⁹¹

⁸⁴ DR 101.

⁸⁵ DR 501, 1999 Chicago Settlement Agreement, page 18.

⁸⁶ Interview #42-8.

⁸⁷ DR 82.

⁸⁸ DR 101.

⁸⁹ DR 101.

⁹⁰ DR 101.

⁹¹ Interview #58.

Although recollecting some of the key conditions surrounding this estimate, ComEd could not produce any documentation of the \$70.0 million project estimate. Nor could ComEd provide any quantitative recap of the evolution of the Kingsbury project cost from \$28.6 million to the final project cost of \$66.1 million. ComEd reports that the original \$28.6 million estimate did not include the purchase of property, existing structure demolition, building an enclosed station with indoor transformers, neighborhood construction and architectural requirements, the upgrade of primary lines from 69kV to 138kV, conduit and underground work, and City of Chicago building code requirements for fire, noise levels, building and landscape.⁹² ComEd also did not provide a breakdown of the value of each of these items.

ComEd did provide the minutes from an early project meeting dated May 17, 2000, that stated:⁹³

preliminary copy of the Project Budget was distributed at the meeting. ... This budget indicated that the work was anticipated to take 51 weeks and cost ~ \$30,500,000, including the cost of purchasing the building.

The notes also state that:

The Project Team spent time adding detail and reworking the budget. The first pass at a revised budget yielded an estimated cost of \$46.23 million (see attachment).

ComEd was unable to locate either of these Kingsbury budget versions. In June 2000, the \$28 million estimate increased to \$46 million. According to ComEd project management, this increase came after a more detailed review by ComEd of the costs for Kingsbury.⁹⁴

ComEd issued an RFP for Kingsbury work; three proposals were received in July 2000. ComEd awarded the work to Kenny Construction in July 2000 as a design/build project. Reportedly, ComEd used part of an internal approval process called the “Challenge Process” to develop the schedule, estimate, and scope for the Kingsbury project. The Company then subjected this information to independent scrutiny. ComEd eventually used this information to negotiate a contract price with Kenny.⁹⁵

Kenny and ComEd agreed on a lump sum price in December 2000; however, the agreed-upon price was less than [REDACTED] million due to change orders and a mutual savings component. ComEd and Kenny agreed to share the risk of contingency costs and ComEd managed the project. The Kenny team consisted of Kenny, which was responsible for civil engineering and construction management, M.J. Electric, and Sargent and Lundy. Kenny did all of the work inside the station, except for the cable work. ComEd performed the 138kV cable work and the 12kV cable and conduit work in the street. According to ComEd project management, three major change orders occurred on the project. The change orders provided for additional capacitors, additional inductors, and relay work. ComEd provided a December 18, 2000, Challenge Meeting schedule

⁹² DR 684.

⁹³ DR 505.

⁹⁴ Interview #58.

⁹⁵ Interview #58.

that listed the estimated 2001 project dollars at \$62.0 million. ComEd also provided a Kingsbury Project Estimate summary for the April 2001 Challenge Meeting (near the end of the project), which indicated estimated total cash spending of \$70.4 million.⁹⁶

The electric in-service effective date of the Kingsbury substation was May 15, 2001. The main project ID used to track project costs in CBMS included costs for the construction of the substation by Kenny, which totaled \$49.4 million. ComEd performed the following project work, with the cost of this work increasing the total cost of the project to \$66.6 million:⁹⁷

- \$954,000 for Chicago Optimization Planning
- \$7.1 million for the purchase of additional land
- \$3.893 million for extending 138kV lines and the conversion from 69kV to 138kV
- \$4.96 million for rerouting 18 - 12kV feeders
- \$284,000 for a new feeder from TDC745.

ComEd prepared a spreadsheet showing the cost per MVA installed for each of its recent substation projects on a unitized basis, as compared with the recently-completed (2002) State substation, as well as two proposed projects. The Company:

- Started with the total project cost
- Subtracted property, distribution and transmission (as well as the 138kV bus and the GIS at Kingsbury/Grand) to remove unique characteristics
- Divided that number by the nameplate rating of the installed equipment.

According to this handout, the adjusted cost per MVA installed was \$222,000 for Diversey, \$382,000 for Kingsbury/Grand, and \$329,000 for State. According to the ComEd attendees, the Kingsbury/Grand project proved so expensive relative to some other projects because it required the tallest and most expensive building that ComEd had built, as well as the most extensive architectural treatment.⁹⁸

Project Management and Planning Issues

ComEd did not appropriately plan and budget for Kingsbury. The October 1991 Chicago Franchise Agreement had identified that a new, 200 MVA substation was required to retire the old Kingsbury substation by around 1999. ComEd did not plan or budget for the new Kingsbury until after the 1999 outages and ABB's System Optimization report, which included Kingsbury as a project to be completed by June 2001. Poor estimating and spending controls helped cause ComEd's approved project estimate to be exceeded by 231 percent. The approved ComEd project estimate for Kingsbury was \$28.6 million. According to ComEd, the approved estimate did not include major, fundamental components such as additional real estate required, demolition, conduit and underground work, the building structure required by Chicago building codes, and necessary equipment upgrades from 69kV to 138 kV.

Yet, ComEd executive management approved this very incomplete project estimate. These facts demonstrate two fundamental problems with ComEd's management systems during the 1999 to

⁹⁶ DR 563, Bates number A0065380.

⁹⁷ DR 171 and CBMS Report PC23.

⁹⁸ Interview #58.

2001 period: a) the inability of planners to prepare reasonable, complete and site-specific project spending estimates, and b) management approval of projects and estimates that were incomplete and grossly inaccurate.

Informational gaps on the Kingsbury project create doubts about unexplained cost increases. ComEd was able to find very little quantitative project information for Kingsbury. The approved project estimate is very rudimentary, and excludes items known to be necessary. ComEd could not produce any version of the \$70 million budget that was supposedly used during the project. ComEd also could not provide any revised project budgets or changes from the original estimate. It was also unable to reconcile dollar changes in project costs. The Company's planning and project management failures undoubted increased the cost of the Kingsbury substation significantly. Liberty believes that the cost could have been as much as 10 percent lower, but conservatively recommends a disallowance of five percent. A five percent disallowance on the cost under the Kingsbury project IDs included in the distribution rate case, less the other labor-oriented adjustments, totals \$2,883,656.⁹⁹

Project Costs

The following table summarizes the costs of the Kingsbury project by major category as of June 30, 2001.¹⁰⁰

Kingsbury Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$255,802
Hourly - Premium Time	231,712
Salaried - Regular Time	358,255
Salaried - Premium Time	38,419
Materials	3,228,278
Services/Contractors	50,996,978
Other	1,163,024
AFUDC, etc	1,076,221
Overheads	1,055,862
Employee Overhead Costs	472,200
Final Total	\$58,846,751

⁹⁹ Liberty's recommended adjustments totaled \$8,425,696, which, when subtracted from the \$66,098,820 rate base claim, yields \$57,673,124. Five percent of this revised total is \$2,883,656.

¹⁰⁰ DR 507. Figures represent balance in account 107 as of June 30, 2001 for all project IDs, plus the balance in account 106 as of June 30, 2001 for project ID KINGSB.

ComEd used an estimated cost at completion for the purposes of preparing its DST rate base claim. As discussed elsewhere, for those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be eligible for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$7,252,076.¹⁰¹

ComEd Employee Overtime

The amount of ComEd craft overtime used on the Kingsbury project was very high, nearly 40 percent. Salaried overtime was acceptable, at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$56,724. The concomitant adjustment for benefits and overhead for the \$56,724 adjustment is \$92,688.

Contractor Overtime

ComEd used a significant number of contractors on the Kingsbury project. According to invoice information provided by ComEd, major contractors received the following amounts:¹⁰²

Major Contractors on Kingsbury Project

Contractor	Payments through February 28, 2001
Kenny Construction	\$30,647,213
Earth Tech	\$123,188
Nash Bros. Construction	\$1,450,057
Reliable Construction	\$106,284

As discussed elsewhere in this report, Liberty recommends disallowance of contractor overtime in excess of 20 percent. ComEd provided some limited manpower information for all but Earth Tech. Based on the information provided by ComEd, Liberty was able to determine that there was excess overtime used by Kenny Construction, but no excess overtime by Nash Brothers or Reliable Construction. Liberty has calculated a downward adjustment of \$1,024,208 to remove the excess overtime associated with the Kenny work.¹⁰³

¹⁰¹ This adjustment is consistent with the adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

¹⁰² DR 567.

¹⁰³ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours, and [REDACTED] double time hours were used by Kenny Construction.

LaSalle Project

Adjustment Summary

ComEd placed the LaSalle project into service during 2000, and included in its proposed DST rate base a cost of \$49,641,680.¹⁰⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess AFUDC	\$4,442,568
Removal of excess ComEd hourly overtime	\$131,407
Removal of hourly employee-related costs/allocated OH	140,488
Removal of excess ComEd salaried overtime	31,450
Removal of salaried employee-related costs/allocated OH	33,624
Removal of excess contractor costs - Henckels	11,668
Removal of excess contractor costs – Par	12,271
Total	\$4,803,476

Background

LaSalle was a priority project; it formed part of ComEd's commitment to the City of Chicago. It had also been included in the Company's Franchise Agreement with the City in 1991, which anticipated that the project would be in service in 1993. The station was one of the oldest in the Loop area, with an initial in-service date of 1958.

ComEd authorized \$22.3 million in 1990 for the LaSalle project, which involved converting the supply from 69kV to 138kV, expanding the site through the acquisition of adjacent property, and replacing 12.5kV switchgear. The Company included LaSalle in its 1991 to 1995 five-year budget.¹⁰⁵ The original scope for the project in 1990 was essentially the same as the one actually begun in 1999.

Liberty believes that the Company intended to complete the project over the 1991 to 1994 period, but halted progress because of capital budget constraints.¹⁰⁶ The 1991 to 1995 budget indicated significant anticipated spending over that four-year period, with the bulk of the transmission work slated for 1991 to 1992. ComEd actually began work on the project in the

¹⁰⁴ Figures represent the sum of amounts from DR 283 for the following project IDs: A07257, A11256, A11257, A11258, W00240, W00241, W00242, and W00243. Not included in the figure above is \$0.754 million for project ID A02233, which was for the transmission site (DR 585). ComEd attendees at the June 11, 2002 interview stated that the last transformer was completed in May 2000 and that the project was considered in-service at that time.

¹⁰⁵ DR 101, for example the budget document for Budget 3305 dated May 30, 1990.

¹⁰⁶ DR 101. A draft version of a presentation to ComEd's Senior Management Committee, dated June 2000, clearly stated that the project was first authorized in 1990, but was placed on hold due to budget constraints, as well as reallocation of resources to higher priority work, during the 1991 to 1996 period.

early 1990s, but put the project on hold. The Company's 1995 capital budget indicated that \$8.4 million had already been spent through the end of 1994. According to ComEd personnel, some of the early work on LaSalle included purchasing land, doing rock tunnel work under the river near the Taylor substation, installing an oil-cooling building at LaSalle for the 138kV cable, and laying some conduit at LaSalle to reach the Chicago Freight Tunnel.¹⁰⁷ ComEd had also purchased some switchgear and cable early in the 1990s, which it put into storage when ComEd delayed the project. Costs for the project to that point remained in CWIP.

The original justification for the LaSalle project in 1990 indicated that this project was part of an on-going program to improve reliability to the Chicago Downtown area.¹⁰⁸ Specifically, the justification included the following:

- It would provide for the conversion of supply to LaSalle from the Jefferson 69kV system to the 138kV system at Taylor.
- It was the first step in a long range plan to eliminate the 69kV island of critical load [REDACTED].
- It would reduce ComEd's vulnerability to the loss of a major TSS [REDACTED]

[REDACTED]¹⁰⁹ At the same time, ComEd personnel stated that the load growth factors relevant to the construction the project changed in the early 1990s. ComEd's load forecasts in the late 1980s and early 1990s indicated that growth would be high, but the load growth did not actually materialize by the early 1990s.

Preliminary data indicate that the LaSalle substation became overloaded in 1998 under normal conditions (124 MW with an allowable load of 123 MW).¹¹⁰ Liberty's review did not support the conclusion that high expected load growth was the impetus for the project in 1990, or that the failure of load growth to materialize in the early 1990s bore a strong relationship to the reasons for delaying it. The system was vulnerable in 1990 and it remained vulnerable in the intervening years. According to ComEd, although some load was transferred from LaSalle to the new Ontario TDC in 1991, no other specific actions were taken to address this vulnerability as the Company delayed LaSalle.¹¹¹ Indeed, the failure to relieve [REDACTED] contributed to the events of the summer of 1999.

As noted earlier, the initial estimate for the project in 1990 was \$22.3 million for investment (plus \$0.62 million for removal costs). The Company decided to move forward with the project sometime in 1997, but delayed progress for 15 months while the Company worked to secure the

¹⁰⁷ Interview #42-1.

¹⁰⁸ DR 101, for example the budget document for Budget 3305 dated May 30, 1990.

¹⁰⁹ Interview #42-1.

¹¹⁰ DR 535, Five Year Plan information, File 98CTCDC.pdf. Loads for 1993 through 1998 were as follows, based on 123 MW capacity: 1993 - 87%; 1994 - 93%; 1995 - 97%; 1996 - 85%; 1997 - 97%; and 1998 - 101%. Based on the loads in 1994 and 1995, the substation expansion should have been on line in 1994 or 1995.

¹¹¹ DR 495.

permits to lay conduit in the Chicago Freight Tunnel. According to ComEd, the Chicago floods in 1992 made the permitting process for construction in the tunnel more difficult and politically sensitive. By the time the project was back in a more active status again in 1999, the cost estimate had changed to \$30.9 million.¹¹²

ComEd's planning documents indicated that the actual cost (without corporate overhead) for the LaSalle project was significantly higher than estimated, at approximately \$37 million.¹¹³ However, the final cost of the project came in at nearly \$50 million. The Company stated that it had severely underestimated the amount of temporary work that would be required to accomplish the conversion while still keeping the station in service throughout the project. The Company had based its initial estimates on its recent work in building the Ontario substation. ComEd personnel stated that the project had been unlike anything it had done before. Extreme congestion at the LaSalle substation forced portions of the work to be done under more costly methods (for example, hand digging rather than equipment use was employed to avoid disruptive accidents).

Liberty believes that a primary reason that the project costs for LaSalle proved so much higher than budgeted was incomplete preliminary estimating of the work involved. According to ComEd personnel, the revised \$30.9 million estimate in 1999 was equivalent to that of \$22.3 million in 1990, in that neither estimate reflected the actual amount of work required to rebuild the station while keeping it in service.

Liberty believes that the LaSalle project should have been in-service as of year-end 1994, consistent with the schedule set out in the 1991 to 1995 budget. ComEd certainly did experience significant delay in obtaining permits for the underground line work in the 1998 to 1999 period. Liberty believes, however, that ComEd would not have faced this delay had the project proceeded as planned. During an interview with Liberty, ComEd's project manager for LaSalle indicated that the Company would have been well past the permitting process before the 1992 Chicago floods.¹¹⁴ Liberty has concluded that the LaSalle project should have been completed much earlier, and been in place well before the strains on the system that ComEd experienced in the summer of 1999. Had this project been completed, the events contributing to the outages of 1999 would have encountered a materially stronger system.

Project Costs

The following table summarizes the costs of LaSalle by major category as of December 31, 2000.¹¹⁵

¹¹² DR 429, Authorization Project Status Updated as of September 30, 1999. As clarified in DR 508, the \$8.4 million previously spent on the project was included in the \$30.1 million revised estimate. ComEd added that an additional budget of \$.83 million was allotted for removal of components, thus the total budget for the project was \$30.9 million.

¹¹³ DR 101.

¹¹⁴ Interview #42-1.

¹¹⁵ DR 507. Figures represent balance in account 106 as of December 31, 2000.

LaSalle Project Costs

Cost Category	Amount
Hourly - Regular Time	\$4,793,839
Hourly - Premium Time	1,236,998
Salaried - Regular Time	923,589
Salaried - Premium Time	258,766
Materials	3,876,676
Services/Contractors	4,808,507
Other	16,050,746
AFUDC, etc	9,468,832
Overheads	4,421,244
Employee Overhead Costs	3,802,483
Final Total	\$49,641,680

Liberty found that ComEd had overstated its cost for AFUDC in the LaSalle project. In its proposed rate base, the Company included costs for the LaSalle project as of year-end 2000 of \$49.6 million, of which \$9.5 million was AFUDC. The Company made a reversing adjustment of \$4,442,568 for AFUDC in August 2001, and did not reflect that reversal in its rate base claim. Liberty concluded that this \$4,442,568 should be removed from rate base, because the charges appear to be the result of an accounting error.

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the project was above the level that Liberty determined to be appropriate. It was roughly 15 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$131,407 and \$31,450, respectively. The concomitant adjustments for benefits and overhead for the \$131,407 and \$31,450 adjustments are \$140,488 and \$33,624, respectively.

Contractor Overtime

Liberty has found that the project included an excessive amount of overtime by two contractors during 2000, Henckels & McCoy and Par Electrical.¹¹⁶ Liberty therefore recommends a

¹¹⁶ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours and [REDACTED] double time hours were spent by Henckels & McCoy during 2000. Similarly, [REDACTED] straight time hours, [REDACTED] time-and-one-half hours and [REDACTED] double time hours were spent by Par Electrical during 2000.

downward adjustment of \$11,668 to adjust the Henckels & McCoy charges and \$12,171 to adjust the Par Electric charges to reflect 20 percent overtime.¹¹⁷

During the pre-1998 period, contracting services were provided by Sargent & Lundy, Trench Electric, Duffy Construction, Northwest Contractors, Harrel, Builders Architectural, J.S. Drew Construction, Castle Construction, and Reliable Contracting, among others. According to ComEd, no overtime charges were incurred as part of the contractor charges.¹¹⁸ This pre-1998 work substantially preceded the accelerated work of the 1999 to 2001 period, and Liberty has no other basis for believing that contractor overtime was above acceptable levels.

¹¹⁷ Liberty's method to calculate overtime adjustments for contractors is discussed elsewhere in this report.

¹¹⁸ DR 778. ComEd also stated that costs for contracting and materials pre-1998 were typically charged to resource type "Other" when the costs were moved to the new CBMS accounting system.

Elmhurst to Oakbrook Project

Adjustment Summary

ComEd placed the Elmhurst to Oakbrook project into service during 2001, and included in its proposed DST rate base a cost of \$17,078,117.¹¹⁹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess contractor costs – M.J. Electric	\$308,720
Removal of excess contractor costs – Tri-State	74,440
Total	\$383,160

Background

ComEd designed the Elmhurst to Oakbrook project to add two 138kV transmission lines between Elmhurst TSS and Oakbrook TDC. The work involved installing roughly 5.5 miles of 138kV double circuit structures and overhead conductors, two 138kV circuit breakers, three 138kV line disconnects, and other associated facilities. The purpose of the project was to maintain reliability in the area by relieving expected high loadings on transmission lines and transformers, and by improving expected low voltages during contingency conditions.

Project planning began as early as 1992, with a required in-service date of 1996, and ComEd included projected expenditures to begin in 1996 in its 1995 capital budget. ComEd redesigned the project, and included a revised budget in the 1996 to 1998 capital budget. ComEd made the necessary filings with the Commission to get approval for certification to build the new line in 1995. The Commission gave its approval in 1996. The Company delayed the project, however, because of opposition to the right-of-way for the new lines. Initially, the proposed route involved land owned by both the Tollway Authority and the Illinois Department of Transportation (“IDOT”). The IDOT changed its mind about a portion of the route. ComEd had to re-engineer the project to change crossings and relocate spots for poles. The IDOT later raised concerns about air rights. ComEd again had to re-engineer and move the line to the other side of the Tollway, incorporating roughly 1.1 mile of alternative route. The Village of Berkely then protested the route. ComEd subsequently sought approval from the Commission for the alternative route, and work on the redesigned project began in 2000. Liberty saw no evidence that there was excessive delay once ComEd received approval for the alternative route.¹²⁰

¹¹⁹ Exhibit WPB 2.2a indicated the CWIP value as of March 31, 2001 was \$17,078,117, with service date of March 30, 2001.

¹²⁰ DR 101. A memo dated February 22, 2000 by Paul Sotir, project manager for Elmhurst to Oakbrook, indicated that the project had been deferred due to budgetary constraints, and that the new planned in-service date was June 1, 2001. Year 2000 work was to include engineering, material procurement, and the completion of foundation construction; pole erection and wire stringing was estimated to run from November 2000 to May 31, 2001.

ComEd estimated the cost for the project at \$11.625 million in early 1996. The Company revised this estimate to \$16.9 million by July 2000, on the basis of over \$5 million in scope changes.¹²¹ Reasons cited for the increased costs included:

- The new route resulted in additional equipment and higher state standards.
- Labor and materials costs increased since the original bid proposal was issued in 1997.
- Increased man hours and barrier equipment were needed due to limitations associated with working adjacent to the Tollway.

The Board ultimately approved the increased budget.

Liberty found much of the increase in cost due to scope changes to be reasonable. Liberty did, however, find an excessive use of contractor overtime. ComEd replaced the main contractor on the project after redesigning it. The Company chose to use M.J. Electric under a sole source contract, because M.J. Electric was already doing similar work for ComEd in nearby areas.¹²² ComEd documents indicate that the accelerated schedule and increased overtime may have added \$421,000 to the cost of the project.¹²³

Project Costs

The following table summarizes the costs of the Elmhurst to Oakbrook project by major category as of March 31, 2001.¹²⁴

Elmhurst to Oakbrook Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$142,399
Hourly - Premium Time	22,104
Salaried - Regular Time	156,129
Salaried - Premium Time	20,288
Materials	2,804,294
Services/Contractors	8,137,884
Other	2,052,462
AFUDC, etc	1,446,945

¹²¹ DR 101. Board of Directors meeting presentation by Carl Croskey dated July 2000 indicated that the project had an estimated final cost of \$16.9 million. DR 448 placed the revised estimated at \$16.7 million.

¹²² DR 449. Burns & McDonnell was the original contractor for the project; the company had increased its base price for the revised project design by \$4.8 million. The scope of work for Burns & McDonnell after M.J. Electric took over was primarily clarification or interpretation of engineering drawings and design of highway barriers.

¹²³ DR 101. Undated document related to Scope Changes of \$4.24 million indicate "bidding hourly rate increase due to overtime of \$421,232, based on [REDACTED]. A purchase requisition for M.J. Electric indicated a firm price of \$4.65 million for service and materials for installation of the 138kV double circuit.

¹²⁴ DR 507. Figures represent balance in account 107 as of March 31, 2001, plus pre-1998 spending.

Overheads	330,853
Employee Overhead Costs	145,474
Subtotal	\$15,258,832
Pre-1998 Spending	1,819,286
Final Total	\$17,078,118

ComEd Employee Overtime

The amounts of ComEd employee craft and salaried overtime were less than 10 percent. Both levels fell below the 10 percent benchmark applied by Liberty, meaning no adjustment for the Elmhurst to Oakbrook project.

Contractor Overtime

M.J. Electric and Tri-State Drilling provided the main contractor services on the project. Both M.J. Electric and Tri-State used high amounts of overtime -- roughly 35 percent and 30 percent respectively.¹²⁵ Liberty therefore recommends a downward adjustment of \$308,720 to adjust the M.J. Electric charges (which is somewhat lower than the figure noted above) and a downward adjustment of \$74,440 to adjust the Tri-State charges to reflect 20 percent overtime.¹²⁶

¹²⁵ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours and [REDACTED] double time hours were spent by M.J. Electric, and that [REDACTED] straight time hours and [REDACTED] time-and-one-half hours were spent by Tri-State Drilling.

¹²⁶ Liberty's method to calculate overtime adjustments for contractors is discussed elsewhere in this chapter. Note that the adjustment for M.J. Electric is based on man-hours and invoices through March 31, 2001 only; all of the Tri-State work was completed by year-end 2000.

Aptakisic Project

Adjustment Summary

ComEd placed the Aptakisic project into service during 2001, and included in its proposed DST rate base a cost of \$7,215,670.¹²⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$31,261
Removal of hourly employee-related costs/allocated OH	34,802
Total	\$66,802

Background

The Aptakisic project involved expanding the capacity at the station, reportedly to relieve load at the nearby Buffalo Grove and Wheeling stations. Justification for the project included preventing an overload for the loss of a transformer in the year 2000, as well as replacing troublesome switchgear and a control building. Phase 1 of the project included building a new switchgear building, installing a new 40 MVA transformer and connecting it to the new switchgear. The Company expected to leave the original two transformers to run through the old switchgear. Phase 2 of the project involved cutting the transformers over to the new building and cutting the feeders over to the new switchgear.

ComEd first included the Aptakisic project in the 1992 to 1994 capital budget, with an authorized budget of \$4.68 million. By 1995, proposed expenditures for the project had moved to “future” years. According to ComEd personnel, the completion of the Lake Zurich substation in the 1995 to 1996 time frame allowed ComEd to postpone the Aptakisic project, although the Company expected it would still have to expand the capability at Aptakisic in the future.¹²⁸ Liberty has therefore concluded that the project was not unduly delayed until it was revived in 1999.

The Company estimated in April 1999 that the project would cost \$6.3 million, which represents an escalation in costs of approximately 3 percent per year over the intervening seven-year period.¹²⁹ Actual costs for the project were considerably higher, however. ComEd personnel told Liberty that the justification for the Aptakisic project had likely resulted from a rough planning estimate. In contrast, later estimates would have considered more complete, site-specific

¹²⁷ DR 283. The Aptakisic project was a reliability-related project that had been refunctionalized from transmission to distribution. ComEd attendees at the June 12, 2002 interview stated that the first phase of the project was completed during the summer of 2000 and the second phase was completed during the summer of 2001.

¹²⁸ Interview #42-21.

¹²⁹ DR 441.

engineering analysis. Also, ComEd had reportedly underestimated the cost of the switchgear for the project, and overlooked the cost of cutting over the circuits.¹³⁰

Project Costs

The following table shows the costs of the Aptakisic project by major category as of December 31, 2000.¹³¹

Aptakisic Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$341,977
Hourly - Premium Time	161,199
Salaried - Regular Time	380,453
Salaried - Premium Time	62,900
Materials	2,613,111
Services/Contractors	2,429,330
Other	374,747
AFUDC, etc	0
Overheads	427,948
Employee Overhead Costs	424,005
Final Total	\$7,215,670

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$31,261. The concomitant adjustment for benefits and overhead for the \$31,261 adjustment is \$34,802.

Contractor Overtime

Four large contractors provided services on the project: Square D, Utility and Industrial Construction, Henckels & McCoy, and GE Harris. According to information provided to Liberty, Square D provided a concept substation unit rather than labor. Liberty saw no evidence of excess overtime for Utility and Industrial Construction and GE Harris for work done under fixed lump

¹³⁰ Interview #42-21.

¹³¹ DR 507. Figures represent balance in account 106 as of December 31, 2000.

sum contracts.¹³² Liberty found that Henckels & McCoy used excessive amount of overtime, roughly 30 percent; however this work was done during 2001. ComEd did not include any of the costs of that work in it proposed DST rate base.¹³³

¹³² DRs 303 and 567.

¹³³ DR 567 indicated that [REDACTED] straight time hours and [REDACTED] time-and-one-half hours were spent by Henckels & McCoy and its subcontractor, Trench It.

Quarry Project

Adjustment Summary

ComEd placed the Quarry project into service during 2001, and included in its proposed DST rate base a cost of \$3.306 million.¹³⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs incurred through 6/30/01	\$(323,077)
Removal of excess ComEd hourly overtime	25,654
Removal of hourly employee-related costs/allocated OH	28,729
Total	\$(268,694)

Background

The Quarry project consisted of three individual pieces:

- Installing a fourth 50 MVA transformer and an underground transformer lead at Quarry, with a 138kV circuit breaker at nearby Fisk substation
- Adding fans to three existing transformers
- Installing two buses of switchgear as part of the Company's plan to eventually retire Vernon Park TSS.¹³⁵

Project planning began in 2000; Liberty saw no evidence that the project had been planned or authorized previously, although other work was done at Quarry during the 1990s.

ComEd estimated the project's cost as of late 2000 at \$3.0 million.¹³⁶ The Company raised the budget to \$3.66 million in early 2001 through the Company's Challenge process. The project manager for the Quarry project stated that the work was completed at a cost of \$3.3 million (without corporate overheads), which is marginally below the revised estimate.

¹³⁴ Exhibit WPB 2.2b indicated the asset value at completion of \$3,306,683. ComEd attendees at the June 18, 2002 interview stated that the project was done by the end of June 2001. An email document from Ted Tolish dated November, 2001 (DR 101) indicated the in-service date for the bus and transformer work was July 1, 2001.

¹³⁵ Vernon Park, situated in the middle of the UIC campus, is fed from Jefferson Park. A portion of the overall retirement plan involved shifting some of the load to Quarry. Although the retirement of Vernon Park was part of a franchise commitment with the City, the Company renegotiated the agreement to delay retirement until 2004 because of load growth in the area.

¹³⁶ DR 464.

Project Costs

The following table summarizes the costs of the Quarry project by major category as of June 30, 2001.¹³⁷

Quarry Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$246,143
Hourly - Premium Time	126,536
Salaried - Regular Time	177,050
Salaried - Premium Time	9,689
Materials	1,587,919
Services/Contractors	444,615
Other	245,756
AFUDC, etc	127,404
Overheads	344,478
Employee Overhead Costs	320,168
Final Total	\$3,629,760

ComEd used an estimated cost at completion for the purposes of preparing its DST rate base claim. Liberty considers the actual costs incurred through June 30, 2001 to be the proper measure for inclusion in distribution rate base. Liberty therefore recommends an upward adjustment of \$323,077.¹³⁸

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was over 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$25,654. The concomitant adjustment for benefits and overhead for the \$25,654 adjustment is \$28,729.

¹³⁷ DR 507. Figures represent balance in account 107 as of June 30, 2001. ComEd's work on the fans was not included in proposed DST rate base.

¹³⁸ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

Contractor Overtime

According to ComEd personnel, completion by the originally planned in-service date of June 1, 2001 would have required excessive overtime. Therefore, the Company moved the in-service target to the end of June.¹³⁹ Liberty found that there was no excessive, *i.e.*, greater than 20 percent, overtime by contractors.¹⁴⁰

¹³⁹ Interview #42-13.

¹⁴⁰ DRs 303 and 567.

Streator Substation Project

Adjustment Summary

ComEd placed the Streator substation project into service during 2000 and 2001, and included in the proposed DST rate base a cost of \$8,328,428.¹⁴¹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs incurred through 6/30/01	\$22,614
Removal of excess ComEd hourly overtime	26,121
Removal of hourly employee-related costs/allocated OH	33,835
Total	\$82,570

Background

ComEd completed the Streator substation project and placed it into service in late 2001. Although major outages did not occur in the Streator area, which is approximately 100 miles southwest of Chicago, Streator nevertheless represented a relatively high priority reliability project. In the early 1990s, ComEd had considered replacing two Streator 37 MVA transformers with 60 MVA transformers, which would have greatly increased the capacity at the old Streator site. The 1992 to 1994 ComEd capital program included \$2.8 million for replacing the transformers; the project had a “B” (*i.e.*, medium) priority and a December 1994 service date. However, while this document indicated an estimate of spending, it did note that ComEd had not authorized the expenditures. In the next year’s capital program for 1993-1995, replacing the transformers again carried a “B” priority, but the service date changed to December 1997. The 1995 to 1997 capital program projected a start of the Streator project in 1997, with completion in the “future”.¹⁴²

According to planners, ComEd deferred the project because load did not grow as expected in the area, and because the existing substation site presented material difficulties. The existing site had access problems, lies on a riverfront site prone to flooding, and hosted a former gas-manufacturing site.¹⁴³ A project history noted that in 1996, “TSA meets with work planners and operating to get details on problems: transformer problems, structure problems, switch problems, operating problems, and environmental problems.”¹⁴⁴ ComEd acknowledged that Streator had numerous small operating problems over the years because of the age of the substation equipment.

¹⁴¹ The Company included \$7,257,436 of project costs in year 2000 capital additions. As shown on Exhibit WPB 2.2b, the Company requested the balance spent on the project during the first six months of 2001 of \$1,070,992.

¹⁴² DR 216, Bates numbers A0009017, A0008908, and A0008732.

¹⁴³ Interview #42-6.

¹⁴⁴ DR 101.

In the late 1990s, ComEd began looking for a new site. Eventually, ComEd and the City of Streator agreed to do a land swap. The new site, which is somewhat larger than the old site, lies approximately three-quarters of a mile away. To make up for the size difference, ComEd agreed to some community improvement in the area. The land swap is basically a lease for which the City has ownership. As part of the land swap, ComEd had to remediate the old site, which required it to address environmental hazards there, including PCBs, asbestos and cold tar. The remediation was supposed to be complete by June 2001; however, it remains incomplete, and ComEd expects completion in late 2002. When the remediation is complete, ComEd will give the land back to the city of Streator, after which the City plans to make the site a nature area or park.¹⁴⁵

During the 1990s, electric load began to drop in the Streator area. By the time that planners completed a project diagram and cost estimate in 1998, they anticipated the need for only two 40 MVA transformers. They based project estimates on the cost of 40 MVA transformers and relocation to a new site. The project estimate was \$6.9 million, plus \$310,000 in removal costs, for a total of \$7.21 million.¹⁴⁶ The required date for the project indicated on the “Project Diagram Justification” was December 1999. The 1999-2001 capital budgets included Streator at a cost of \$6.5 million.¹⁴⁷

Site preparation started in 1998. Prior to the start of civil work, activities performed included land preparation, soil exploration and technical surveys, and ground compaction checking. In 1999, equipment procurement began. In the second quarter of 2000, construction/civil work on the site began. Although ComEd approved the project cost in the 1999 budget, the city of Streator slowed the process for beginning the work on the site until 2000, because of the land swap. The swap had to be discussed in several public forums during 2000, which delayed the project, according to the ComEd project manager. The in-service date of the new substation was in late 2001.¹⁴⁸

Project spending increased about 18 percent due to coal mine remediation and ground stabilization work that had to be done at the new site, as well as remediation of the old site. Some remediation work continued at the sites in 2002.¹⁴⁹

ComEd did not delay Streator transformer replacement inappropriately. The project to replace the transformers at the old site with 60 MVA transformers showed a 1994 service date, but was not authorized. However, additional load did not materialize in this area, which allowed the Company to defer reinforcement. Age of the equipment drove the eventual station rebuild in 2000-2001.

The Streator project had a cost overrun of about \$1.4 million, which resulted from additional remediation of a coal mine under the existing site being more extensive than originally estimated. Remediation work is generally difficult to estimate.

¹⁴⁵ Interview #42-6.

¹⁴⁶ DR 101.

¹⁴⁷ DR 216.

¹⁴⁸ Interview #42-6.

¹⁴⁹ Interview #42-6.

Project Costs

The following table summarizes the costs of the Streator project by major category as of June 30, 2001.¹⁵⁰

Streator Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$267,003
Hourly - Premium Time	131,572
Salaried - Regular Time	290,166
Salaried - Premium Time	35,589
Materials	3,378,950
Services/Contractors	2,735,958
Other	634,947
AFUDC, etc	90,303
Overheads	460,096
Employee Overhead Costs	281,228
Final Total	\$8,305,812

ComEd used an estimated cost at completion for the purposes of preparing its distribution rate base filing.¹⁵¹ For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers only the actual costs incurred through June 30, 2001 to be eligible for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$22,614.¹⁵²

ComEd Employee Overtime

The amount of ComEd craft overtime used on the Streator project was almost 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$26,121. The concomitant adjustment for benefits and overhead for the \$26,121 adjustment is \$33,835.

¹⁵⁰ DR 507. Figures represent balance in account 106 as of June 30, 2001.

¹⁵¹ The Streator project manager represented the in-service date for the project as “late 2001,” rather than prior to June 30, 2001, as represented by the Company in the rate filing.

¹⁵² The adjustment for this project was not included in the adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

Contractor Overtime

The largest contractor on the Streator project was the IHC Group, which was paid \$1,555,033 under a lump sum contract.¹⁵³ Based on the information provided by ComEd, this contractor did not use excess overtime. ComEd did not provide manpower information for the two other large contractors on the project, Beemsterboer, paid \$649,028, and Laramore, Douglass and Popham, paid \$173,076. Thus, Liberty was unable to calculate any necessary adjustments.¹⁵⁴

¹⁵³ DR 567.

¹⁵⁴ DR 567.

Antioch Project

Adjustment Summary

ComEd placed the Antioch 138 kV line project into service during 1997, and included in its proposed DST rate base a cost of \$9,297,832.¹⁵⁵ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess AFUDC	\$2,088,324
Total	\$2,088,324

Background

The Antioch project involved the construction of six miles of double-circuit 138 kV line to supply the Antioch TDC.

Project Costs

The following table summarizes the costs of the Antioch project by major category as of December 31, 2000.¹⁵⁶

Antioch Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$136,736
Hourly - Premium Time	0
Salaried - Regular Time	318
Salaried - Premium Time	0
Materials	919,094
Services/Contractors	98,783
Other	4,996,822
AFUDC, etc	2,088,324
Overheads	736,924
Employee Overhead Costs	320,819
Final Total	\$9,297,829

¹⁵⁵ DR 283 for project A06362.

¹⁵⁶ DR 507. Figures represent balance in account 106 as of December 31, 2000.

ComEd completed the Antioch project in May 1997. However, ComEd continued to accrue AFUDC on the project during 1998, 1999 and 2000 of \$2,088,324. Liberty had concluded that ComEd inappropriately charged this AFUDC amount given that the project was already electrically in-service.

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the Antioch project was at acceptable levels of less than 10 percent. Therefore, no adjustment is required.

Contractor Overtime

ComEd was unable to provide manpower information for contractors on the Antioch project, and thus Liberty was unable to determine whether there was contractor overtime in excess of 20 percent.¹⁵⁷ According to ComEd, Tri-State Drilling, Henkels & McCoy, Raytheon, and L.E. Meyers provided contract services on the project, but no overtime charges were incurred as part of the charges.¹⁵⁸ The in-service date for the project substantially preceded the accelerated work of the 1999 to 2001 period, and Liberty has no other basis for believing that contractor overtime was above acceptable levels. These four contractors received payments totaling approximately \$2.25 million. Major equipment suppliers for the project were Thomas & Betts Corporation and Summit Manufacturing, which received payments totaling approximately \$2.0 million.¹⁵⁹

¹⁵⁷ DR 567.

¹⁵⁸ DR 780. ComEd also stated that costs for contracting and materials pre-1998 were typically charged to resource type "Other" when the costs were moved to the new CBMS accounting system.

¹⁵⁹ DR 796.

Wilmington Project

Adjustment Summary

ComEd placed the Wilmington project into service during 2001, and included in its proposed DST rate base a cost of \$7,749,924.¹⁶⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$30,594
Removal of excess ComEd hourly overtime	30,450
Removal of hourly employee-related costs/allocated OH	47,548
Removal of excess contractor costs – Aldrich	122,950
Total	\$231,542

Background

The Wilmington project involved adding a second 40 MVA transformer and new 138kV and 34kV breakers, installing a new 34kV line through Braidwood, and reconductoring existing 34kV lines in the Wilmington area. Project planning began in 1999, and Liberty saw no evidence that ComEd had planned or authorized the project previously.

The estimated cost for the project as of early 2000 was \$4.2 million; however ComEd revised this estimate to \$5.4 million by October. In November, 2000, a more formal estimate prepared by the project controls group indicated an estimated cost of \$6.5 million.¹⁶¹ The budget expanded further to \$7.8 million in early 2001 through the Company's Challenge process.¹⁶² The project manager for the Wilmington project stated that ComEd completed the work at a cost of \$8.4 million, which was twice the original estimate.¹⁶³

Like many of the other capital projects that Liberty examined, Wilmington suffered from poor preliminary estimates of the work involved. According to ComEd, the initial planning estimate for the project relied upon historic costs of installing a transformer and related work. The Wilmington site was reportedly somewhat different, in that the yard was very small, and had not been developed for expansion. As a result, ComEd had to expand the yard to twice its original size. ComEd also had to replace some of the yard's concrete foundations that were in disrepair.¹⁶⁴

¹⁶⁰ Exhibit WPB 2.2b indicated the estimated asset value at completion was \$7,749,924. The ComEd attendee at Interview #42-5 stated that the project was done by the end of June 2001.

¹⁶¹ DR 443.

¹⁶² DR 444.

¹⁶³ Interview #42-5. DR 507 data indicated costs of approximately \$8.7 million as of year-end 2001.

¹⁶⁴ Interview #42-5.

Some of the additional cost arose from by unexpected events. During the work for one of the existing 34kV lines, the contractor encountered rock when boring under the river as part of efforts to move facilities underground. The Company halted work and reexamined its options. ComEd subsequently decided to abandon the underground option. Instead it accomplished relief on the existing line by adding switching elsewhere. Liberty concluded that the increases in cost due to scope changes appeared reasonable.

Project Costs

The following table summarizes the costs of the Wilmington project by major category as of June 30, 2001.¹⁶⁵

Wilmington Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$296,314
Hourly - Premium Time	150,885
Salaried - Regular Time	256,551
Salaried - Premium Time	42,668
Materials	2,181,712
Services/Contractors	3,130,597
Other	497,890
AFUDC, etc	290,210
Overheads	481,230
Employee Overhead Costs	410,472
Final Total	\$7,719,331

ComEd used an estimated cost at completion for the purposes of preparing its filing. For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be the proper measure of what is eligible for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$30,594.¹⁶⁶

¹⁶⁵ DR 507. Figures represent balance in account 107 as of June 30, 2001.

¹⁶⁶ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$30,450. The concomitant adjustment for benefits and overhead for the \$30,450 adjustment is \$47,548.

Contractor Overtime

Three large contractors providing services on the project included Henckels & McCoy, Lindblad Construction and Aldrich Electric. The information provided to Liberty disclosed no evidence of excess overtime for Henckels & McCoy or Lindblad. However, Aldrich Electric and its subcontractors (M.J. Electric, Asplundh, Utilix) used roughly 37 percent overtime.¹⁶⁷ Liberty therefore recommends a downward adjustment of \$122,950 to adjust the Aldrich charges to reflect 20 percent overtime.¹⁶⁸ Liberty's proposed adjustment is consistent with information provided in other Company documents. For example, ComEd documents used to track variances from project budget indicated that \$85,254 of overtime, associated with working 58 hour weeks, was requested for work by Aldrich Electric. Apparently, overtime had been authorized for the entire ComEd summer critical Southern Region Contractor of Choice ("COC") program. Although work for Wilmington had been bid without overtime to be completed by June 2001, other ComEd work caused a shortage of COC crews.¹⁶⁹

¹⁶⁷ DR 567 indicated that [REDACTED] straight time hours, [REDACTED] time-and-one-half hours and [REDACTED] double time hours were spent by Aldrich and its apparent subcontractors, M.J. Electric, Utilix and Asplundh. Since the Aldrich work was done under a lump sum contract, increases for overtime had to be approved and handled via an increase to the purchase order.

¹⁶⁸ Liberty's method to calculate overtime adjustments for contractors is discussed elsewhere in this chapter.

¹⁶⁹ DR 101.

Evanston Project

Adjustment Summary

ComEd placed the Evanston project into service in the second quarter of 2001, and included in its proposed DST rate base a cost of \$2,723,181.¹⁷⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$232,873
Removal of excess ComEd hourly overtime	8,048
Removal of hourly employee-related costs/allocated OH	10,686
Total	\$251,607

Background

The Evanston project involved replacing two existing 20 MVA transformers with 40 MVA transformers, new transformer foundations, 12kV duct sections, 138kV leads and 12kV cable. Project planning began in 2000, and Liberty saw no evidence that this project had been planned or authorized previously, although the Company performed other work at Evanston TSS 47 during the 1990s.

ComEd estimated the cost for the project as of early 2000 at \$1.8 million. Updated project diagrams in early 2001 showed the estimated cost to be \$3.2 million. ComEd personnel could not explain the specific reasons for the change in estimates; they stated that further detailed engineering and project management efforts often result in revised budgets that were more realistic for the work eventually required.¹⁷¹ Liberty has found in its examination of other capital projects that ComEd preliminary estimates often miss the final mark by almost 100 percent, but that revised estimates often come much closer. These latter estimates have the benefit of detailed engineering and project management efforts.

Project Costs

The following table summarizes the costs of the Evanston project by major category as of June 30, 2001.¹⁷²

¹⁷⁰ Exhibit WPB 2.2b indicated the estimated asset value at completion was \$2,723,181. ComEd attendees Interview #42-20 stated that the first transformer went into service in the fall of 2000 and the second was operating in May 2001.

¹⁷¹ Interview #42-20.

¹⁷² DR 507. Figures represent balance in account 107 as of June 30, 2001.

Evanston Project Costs

Cost Category	Amount
Hourly - Regular Time	\$111,325
Hourly - Premium Time	45,382
Salaried - Regular Time	107,536
Salaried - Premium Time	10,555
Materials	1,339,537
Services/Contractors	172,345
Other	170,385
AFUDC, etc	165,888
Overheads	165,831
Employee Overhead Costs	141,524
Final Total	\$2,490,308

ComEd used an estimated cost at completion for the purposes of preparing its filing. For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be the proper basis for determining the amounts eligible for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$232,873.¹⁷³

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was over 20 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$8,048. The concomitant adjustment for benefits and overhead for the \$8,048 adjustment is \$10,686.

Contractor Overtime

ComEd personnel advised that the Company did the engineering and construction work at Evanston, but did not do the civil work (foundations and duct work), as was normal practice. The primary contractor to the Company, Utility and Industrial Construction Company, completed the work under a lump sum contract for a total cost of \$131,616. Liberty found no excess contractor overtime use on the project.¹⁷⁴

¹⁷³ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

¹⁷⁴ DR 567.

Algonquin Project

Adjustment Summary

ComEd placed the Algonquin project into service in 2001, and included in its proposed DST rate base a cost of \$19,742,368.¹⁷⁵ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$2,164,689
Removal of excess ComEd hourly overtime	7,337
Removal of hourly employee-related costs/allocated OH	12,008
Removal of excess ComEd salaried overtime	7,916
Removal of salaried employee-related costs/allocated OH	12,183
Removal of excess contractor costs – Tri-State	3,356
Total	\$2,207,489

Background

The goal of the Algonquin project was to improve service reliability for customers and provide for future load growth in the vicinity of Algonquin. The title of the first project diagram (“PD”) for the Algonquin project that ComEd supplied to Liberty was “Algonquin TDC 259, Initial Installation of 2-40 MVA, 138 -12.5 kV transformers.” The Company issued that PD and approved the project for engineering and construction in December 1991. Later updates came in 1992, 1993, and 1996.¹⁷⁶

ComEd never envisioned Algonquin substation as a standalone project. Instead, it formed part of a larger project that would include the infrastructure that would supply Algonquin. The project description of November 1996, which showed a planned in-service date of June 1, 2001, for the entire project including the Algonquin substation, included other, related construction:

- Building the Pleasant Valley TSS 141, described in part as installing a 138 kV bus, at an estimated cost of \$8.8 million.
- Building a double-circuit 138 kV line to the Algonquin TDC, at an estimated cost of \$4.5 million.
- Purchasing site and land at an estimated cost of \$6.5 million.
- Installing feeders at Algonquin, at an estimated cost of \$4 million.

¹⁷⁵ Exhibit WPB 2.2b indicated the estimated asset value at completion was \$19,742,368.

¹⁷⁶ DR 101.

The estimated cost of this comprehensive project totaled \$28.3 million. Liberty's analysis focused on the distribution work of the larger project, *i.e.*, not the Pleasant Valley transmission substation sub-project and associated transmission work.¹⁷⁷

This comprehensive project did not begin after its first approval. The start of the project lagged because ComEd encountered local opposition in obtaining permits and rights-of-way. To overcome the problem, ComEd applied to the ICC in 1996 for the right to use eminent domain to get the permits and rights-of-way. The ICC approved ComEd's application in 1998. ComEd presented testimony before the ICC in the eminent-domain case (Docket No. 96-0410), stating that it planned to put the Algonquin transformers in service in 2001.¹⁷⁸

A six-page document distributed within ComEd on May 18, 2000, in association with a fourth revision to the Algonquin project description provides additional explanation of the Algonquin and related project delays. It noted that:¹⁷⁹

The project was initially approved in December 1991 for completion in 1995 Line overloads and unacceptable low voltage would occur without this system reinforcement. Subsequent 34 kV system reinforcements permitted deferral of a major capacity addition for this area until 1999.

A study of supply alternatives for the area during the public advisory process to site substations and 138 kV lines during 1995 and 1996 identified the preferred plan as being a six mile 138 kV extension to the North Huntley TDC for 1999 followed by the installation of the Pleasant Valley TSS switching center, six mile North Huntley-Algonquin 138 kV line and Algonquin TDC for 2001. This plan was approved by the Illinois Commerce Commission in May 1998 and authorized ComEd to secure necessary right-of-way by eminent domain, where necessary. The November 1, 1996 revision of the Project Diagram was consistent with the plan approved by the Commission. ComEd has acquired property for both the Pleasant Valley and Algonquin substations. Seven of the fifteen 138 kV right-of-way parcels have been acquired as of May 12, 2000. The remaining parcels will be the subject of court proceedings that begin May 30, 2000.

The fourth revision of the PD contains two significant changes. First, the second 40 MVA 138-12.5 kV transformer is advanced from installation in summer 2002 to summer 2001 in order to avoid 138-34 kV transformer and 12.5 kV transformer overloads for summer 2001. Area load levels are greater than that projected in 1996 due to more commercial and residential development than anticipated.

That document also includes a chart that shows a total project budget of \$29.785 million. It showed \$6.4 million spent prior to 2000, primarily for the high-voltage rights-of-way for the

¹⁷⁷ DR 500, Attachment D, Bates number A0058582 shows that the estimates for HV and transmission portions were \$20.17 million out of a total projected total cost of \$29.785 million.

¹⁷⁸ DR 24, Bates number A0007944.

¹⁷⁹ DR 500, Attachment D, Bates numbers A0058581-58586.

North Huntley TDC to Algonquin six miles of line (\$3.415 million) and that circuit (\$1.870 million). Projected expenditures were \$3.485 million in 2000 and \$19.9 million in 2001.

The document also included an “Algonquin Budget History,” which displayed the changes in costs and scope of Revision 1 (1992), Revision 3 (1996), and Revision 4 (2000). Revision 1 had an in-service date of June 1, 1997 and the latter two revisions had in-service dates of June 1, 2001. The total budget decreased from \$33.69 million in Revision 1 to \$20.52 million in Revision 3, increasing to \$28.3 million in Revision 4. The text that described the revisions was as follows:¹⁸⁰

Revision 1

*Service Date 6-1-97
7 breakers at Pleasant Valley
138 kV from Pleasant Valley to Algonquin*

Revision 3

*Service Date 6-1-01
3 breakers at Pleasant Valley
138 kV from N. Huntley to Algonquin only
The 138 kV from Pleasant Valley to North Huntley transferred to North
Huntley Project
Algonquin TDC changed to a concept modular sub[station] design
Algonquin TDC site moved one mile west
DIST costs go up, TSM costs go down*

Revision 4

*Service Date 6-1-01
6 breakers at Pleasant Valley
138 kV from N. Huntley to Algonquin only
Real Estate Costs increase*

The subject of Algonquin planning came up at a Challenge meeting of January 25, 2000. At that time there was a “Budget Work Plan Estimate” of \$23.8 million and a “Challenge Estimate” of \$27.3 million. Most of the difference came from an increase for the Pleasant Valley bus project.¹⁸¹

ComEd prepared a Project Charter dated September 6, 2000 and a Project Scope dated September 8, 2000. The charter repeated the planned in-service date of June 1, 2001, but the budget numbers were not included. Under “Approach” the charter listed the engineering and construction company Black & Veatch (“B&V”) as responsible for the design, aboveground construction, and transmission construction, with only the contracting of the belowground construction at the substation not yet decided.¹⁸²

¹⁸⁰ DR 500, Attachment D, Bates numbers A0058581-86.

¹⁸¹ DR 24, Bates number A0008093.

¹⁸² DR 101.

The Company revised the project charter in January. The charter stated that the mission of the project was to improve reliability and provide for future growth by building a transmission distribution center at Algonquin, new 138 kV busses at Pleasant Valley, and the 138 kV lines from the North Huntley TDC.¹⁸³ The new charter stated the objective of an in-service date of May 15, 2001, but again did not show a target budget number.

Liberty asked ComEd for documents that described how the Company procured the services of B&V. ComEd provided no documents that showed the process used, but explained that it hired B&V under an executive decision because of “schedule and resource constraints” and its performance on six prior substation projects.¹⁸⁴ ComEd signed the contract with B&V on September 12, 2000.¹⁸⁵ The payments to B&V totaled \$3,823,895, which represented a net increase due to change orders and sharing of savings of about \$80,000.¹⁸⁶

The August 2000 Project Plan described the scope of the project as two new greenfield sites for the Pleasant Valley TSS 141 (138 kV to feed Algonquin, North Huntley, and future load) and Algonquin TDC 259. The latter project would start with a 138 kV Bus, circuit switchers, two 40 MVA transformers (ultimately four will be installed) and considerable associated equipment for a new TDC. To supply 138 kV power from Pleasant Valley to TDC 259, a 6.5-mile 138 kV double-circuit line would be built, and also the North Huntley substation would be tapped with two new 138 kV circuits.

The Project Plan also described the purpose of the project as providing capacity to relieve overloads expected in several areas in 2001, correcting a problem of low voltage on four feeders, improving reliability for customers on ten feeders, and correcting several contingency problems in the area. The document described the alternative to this project as expanding the existing 34 kV system, which would cost \$12 million more and would not have provided the same reliability improvement.

By October 2000 detailed design engineering had begun, grading and drainage plans were complete, and B&V had 13 people working on the project team. At that time the project manager planned for the Algonquin substation to be in service in June 1, 2001. Work continued throughout the following eight months, and the project manager reported on June 21, 2001 that both the Pleasant Valley and Algonquin substations were completed successfully by June 1, 2001. An “Executive Project Status Summary,” which showed information reported through December 31, 2001 for the larger Algonquin project and related new Algonquin feeders, confirmed that the spending was less than budgeted, including contingency money.¹⁸⁷

Liberty concluded that ComEd proceeded with Algonquin at the pace it planned starting in 1996, and completed the project as planned before summer 2001. Although originally planned in 1991 for installation in 1995, the project experienced problems in the acquisition of rights-of-way. These problems delayed the project. ComEd completed the project as re-planned to have new infrastructure in place for summer 2001.

¹⁸³ DR 24, Bates number A0007978.

¹⁸⁴ DR 500.

¹⁸⁵ DR 500.

¹⁸⁶ DR 500.

¹⁸⁷ DR 500 Bates number A0058595.

Project Costs

The following table summarizes the costs of the Algonquin project by major category as of June 30, 2001.¹⁸⁸

Algonquin Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$51,784
Hourly - Premium Time	33,086
Salaried - Regular Time	252,170
Salaried - Premium Time	68,414
Materials	4,239,892
Services/Contractors	9,591,173
Other	661,290
AFUDC, etc	110,885
Overheads	333,029
Employee Overhead Costs	53,388
Subtotal	\$15,395,111
Pre-1998 Spending	2,003,652
Final Total	\$17,398,763

ComEd used an estimated cost at completion for the purposes of preparing its filing. For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be the proper measure of those costs eligible for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$2,164,689.¹⁸⁹

ComEd Employee Overtime

The amount of ComEd craft overtime used on the Algonquin project was roughly 30 percent, and salaried overtime was roughly 15 percent. Using 10 percent as a benchmark for the appropriate

¹⁸⁸ DR 507. Figures represent balance in account 107 as of June 30, 2001.

¹⁸⁹ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

level of overtime, the adjustments to craft and salaried labor expense would be \$7,337 and \$7,916, respectively. The concomitant adjustments for benefits and overhead for the \$7,337 and \$7,916 adjustments are \$12,008 and \$12,183, respectively.

Contractor Overtime

The largest contractors on the Algonquin project were Henckels & McCoy, Black & Veatch, and PowerCon. Based on the information provided by ComEd, no excess overtime was used by Black & Veatch and Henckels & McCoy.¹⁹⁰ ComEd did not provide manpower information for PowerCon. ComEd did provide manpower information on Tri-State Drilling, but no invoice information. Liberty has therefore assumed that this company was an electrical subcontractor for one of these other contractors, and has calculated an adjustment, \$3,356, based on estimated labor rates.¹⁹¹

¹⁹⁰ DR 567.

¹⁹¹ DR 567 indicated that [REDACTED] straight time hours and [REDACTED] time-and-one-half hours were used by Tri-State Drilling.

North Huntley Substation Projects

Adjustment Summary

ComEd placed the North Huntley substation transformer projects into service in August 1999 and April 2000, and included in its proposed DST rate base a cost of \$13,304,779.¹⁹² Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$23,903
Removal of hourly employee-related costs/allocated OH	25,555
Total	\$49,458

Background

The North Huntley substation project included the installation of two 40 MVA, 138-12.5kV transformers as a concept substation with associated busses. The substation project also included the extension of 138kV transmission lines for 6 miles to the new station site, the relocation of 345kV line from towers to quad circuit poles for one mile, and four 12kV feeders. The in-service dates for the two transformers, according to the Company, were August 1999 and April 2000.¹⁹³

In 1992, a project diagram drawn for a proposed North Huntley substation showed a tentative utilization date of June 1996. However, ComEd apparently did not authorize North Huntley at this time; it does not appear in the approved capital budgets.

In November 1996, a subsequent project diagram showed the initial installation of two 40 MVA, 138-12.5kV transformers, with a project estimate of \$19.4 million and \$175,000 for removal. The planning date for the project was June 1999. The substation would serve the load growth in rapidly developing areas. The project justification noted:¹⁹⁴

This project is required to prevent low voltage and overloads for normal and outage conditions on the 34kV system in southeast McHenry County during the summer of 1999. The overloads projected in 1998 with all facilities in service are 5% on Crystal Lake TSS 75 transformers (34kV), 15% on 34 kV line 12368, and 10% to 19% on eight 34-12.5kV DC transformers. For various single line outage conditions, 34kV line loading and voltage levels are unacceptable, the worst being a 52% line overload and voltages at 98.6% of the minimum allowable. Aggressive

¹⁹² The transformer portion of the first East Rockford project (project ID A11281) was included in proposed rate base at a cost of \$12,093,114 (see DR 283). The feeder portion of the project (project ID FDR221) was included in proposed rate base at a cost of \$1,211,665 (see DR 177, p. 16 of 18).

¹⁹³ Interview #42-10.

¹⁹⁴ DR 101.

promotion of direct load control of residential and commercial customer equipment permits this project to be delayed until 1999.

However, Liberty found no indication that ComEd authorized the project for the 1997-1999 or 1998-2000 capital programs.¹⁹⁵ ComEd project management was unsure when the project budget was actually approved. Liberty found no other estimates or approval documents in the ComEd files. The project did, however, appear in the 1999 to 2001 capital program for \$17.1 million in 1999 and \$3.1 million in 2000.¹⁹⁶

ComEd's "Final Status Sheet" provides a status summary, identified risks, financial detail, milestones and events. The property required a wetland permit, which the Company received in March 1999, and site work began that same month. The installation of the 6 miles of 345kV line L15616 from towers to poles was completed in phases of two miles each. One mile of the line was taken out and had to be restrung during an outage at Byron Nuclear Station. The desired service date (for at least the first transformer) was August 1, 1999. On this day, ComEd energized the equipment, but it did not carry load at first. The feeders were not tied until August 4, at which time they started carrying load. The second transformer was needed as a replacement for a transformer failure at another substation, and ComEd ordered and installed a replacement transformer by April 2000. The Company energized the second transformer on April 5, 2000 and it began carrying load the following day.¹⁹⁷ The project budget indicated in the Final Status Sheet totaled \$14.6 million.¹⁹⁸

The North Huntley substation project was not delayed significantly. The project justification written in 1996 indicated that the project was not needed until 1999. However, the document also indicated that overloads would occur by 1998 if load control measures were not effective. The substation was not fully operational until April 2000. ComEd reported that significant reliability problems did not occur in this area during this time period.

Project Costs

The following table summarizes the costs of the North Huntley substation project as of December 31, 2000.¹⁹⁹

North Huntley Substation Project Costs

Cost Category	Amount
Hourly - Regular Time	\$436,349
Hourly – Premium Time	152,402
Salaried - Regular Time	513,555
Salaried – Premium Time	82,022

¹⁹⁵ DR 216.

¹⁹⁶ DR 216, Bates number A0008596.

¹⁹⁷ Interview #42-10.

¹⁹⁸ DR 101, Final Status Sheet document dated August 1, 2000 (no Bates number).

¹⁹⁹ DR 507. Figures represent balance in account 106 as of December 31, 2000.

Materials	6,081,903
Services/Contractors	5,236,638
Other	1,042,874
AFUDC, etc	21,262
Overheads	(610,115)
Employee Overhead Costs	347,886
Final Total	\$13,304,779

ComEd Employee Overtime

The North Huntley substation project came in under budget, but used higher levels of overtime. ComEd craft overtime was roughly 20 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$23,903. The concomitant adjustment for benefits and overhead for the \$23,903 adjustment is \$25,555.

Contractor Overtime

Four large contractors provided services under lump sum firm or blanket contracts on the first North Huntley project: Square D (\$1.0 million), Utility and Industrial Construction (\$0.8 million), Tri-State Drilling (\$0.9 million), and MJ Electric (\$1.6 million). However, ComEd could not provide manpower information for these contractors, and thus Liberty was unable to calculate any necessary adjustments.

North Huntley Feeder Project

Adjustment Summary

ComEd placed the North Huntley feeder project into service during 2001, and included in its proposed DST rate base a cost of \$3,258,427.²⁰⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$149,853
Total	\$149,853

Background

The feeder project at North Huntley TDC involved the installation of 12kV bus additions to the substation, the installation of 18,000 feet of 12kv cable for three new feeders, the upgrade of overhead circuits, and the removal of three transformers and all associated 34kV equipment.²⁰¹

The cost estimate totaled \$2.48 million, with all feeder work estimated to be completed by May 2001.²⁰²

Project Costs

The following table summarizes the costs of the North Huntley feeder project as of June 30, 2001 by major category.²⁰³

North Huntley Feeder Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$145,248
Hourly - Premium Time	19,379
Salaried - Regular Time	118,198
Salaried - Premium Time	10,781
Materials	1,120,552

²⁰⁰ Exhibit WPB 2.2b indicated the estimated asset value of this project (project IDs T221BS and T221FD) at completion was \$3,258,427.

²⁰¹ DR 101, Bates number A0008516.

²⁰² DR 101, Bates number A0008516. Liberty did not interview the project manager for the feeder project; ComEd only provided personnel during the interview knowledgeable about the substation work at North Huntley.

²⁰³ DR 507. Figures represent balance in account 107 as of June 30, 2001.

Services/Contractors	1,051,292
Other	204,715
AFUDC, etc	100,959
Overheads	165,338
Employee Overhead Costs	172,112
Final Total	\$3,108,574

For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to constitute the measure of eligibility for inclusion in distribution rate base. Liberty therefore recommends a downward adjustment of \$149,853.²⁰⁴

ComEd Employee Overtime

The amount of ComEd craft overtime and salaried overtime on the North Huntley feeder project was less than 10 percent. Therefore, no adjustment is required for the project.

Contractor Overtime

Two large contractors provided services under lump sum firm contracts: Henckels & McCoy (\$0.8 million) and Reliable Contracting and Equipment Company (\$0.1 million). Liberty recommends disallowance of contractor overtime in excess of 20 percent. However, ComEd could not provide manpower information for these contractors, and thus Liberty was unable to calculate any necessary adjustments.

²⁰⁴ Note that this adjustment is not consistent with the adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01, where the approved amount as of June 30, 2001 was shown as \$2,267,254, considerably lower than the figures derived by Liberty. In DR 640, ComEd stated that it had understated the amount for North Huntley previously reported to Staff in DR GEG 1.01.

Garden Plain Project

Adjustment Summary

ComEd placed the Garden Plain project into service during 2001, and included in its proposed DST rate base a cost of \$1,721,075.²⁰⁵ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$(153,152)
Removal of excess ComEd hourly overtime	12,418
Removal of hourly employee-related costs/allocated OH	20,019
Total	\$(120,715)

Background

The Garden Plain project existed at some level as early as 1992, when it appeared in a printout of a three-year construction program. The project included the installation of two 40 MVA transformers, including the removal of two old 20 MVA transformers, with spending anticipated to occur in 1993 and 1994, at a cost of \$1.4 million. The next construction-program printout showed the projected in-service date as June 1996 with a budget increase to \$1.495 million.²⁰⁶

ComEd indefinitely deferred the project thereafter, but Liberty received no documents that described the reason for that deferral.²⁰⁷ Planning to undertake the project started again in the latter half of 1999 as part of the Remaining Economic Life Assessment Program (“RELAP”).²⁰⁸ A project diagram approved for construction in October 1999 showed a budget estimate of \$1.6 million.²⁰⁹

Documents from 1999 indicate that ComEd’s engineers had serious concerns about the old transformers’ ability to make it through the summer 2000. Despite that, ComEd’s planners moved the in-service dates of the new transformers to a point after summer 2000 but before summer 2001.²¹⁰

The project started in summer 2000 with transformer ordering. In January 2001 the Company changed the in-service date from December 2000 to May 2001, with an estimated budget of \$1.8 million.²¹¹ The planned in-service date changed from January 2000 because there was no capacity problem at Garden Plain, there were competing projects, and the Company was

²⁰⁵ Exhibit WPB 2.2b indicated the estimated asset value at completion was \$1,721,075.

²⁰⁶ DR 216.

²⁰⁷ DR 101.

²⁰⁸ DRs 101 and 221.

²⁰⁹ DR 221 supplement.

²¹⁰ Interview #42-9.

²¹¹ DR 221 supplement.

approaching its limit on the availability of transformers made by Waukesha. Eventually concerns about the reliability of the old equipment, in combination with a pending capacity problem, made the project summer-critical for 2001.²¹²

The Company energized the new equipment in May 2001. Final as-built drawings came later and ComEd made a financial closing of the project before the end of the year.²¹³

Project Costs

The following table summarizes the costs of the Garden Plain project by major category as of June 30, 2001.²¹⁴

Garden Plain Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$134,967
Hourly - Premium Time	63,889
Salaried - Regular Time	93,360
Salaried - Premium Time	12,574
Materials	1,079,645
Services/Contractors	62,916
Other	105,598
AFUDC, etc	21,188
Overheads	128,136
Employee Overhead Costs	131,254
Subtotal	\$ 1,833,527
Pre-1998 Spending	40,700
Final Total	\$1,874,227

ComEd used an estimated cost at completion for the purposes of preparing its filing. For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 to be the proper measure of eligibility

²¹² Interview #42-9.

²¹³ Interview #42-9.

²¹⁴ DR 507. Figures represent balance in account 107 as of June 30, 2001 plus pre-1998 spending.

for inclusion in distribution rate base. Liberty therefore recommends an upward adjustment of \$153,152.²¹⁵

ComEd Employee Overtime

The amount of ComEd craft overtime used on the Garden Plain project was somewhat high at roughly 25 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$12,418. The concomitant adjustment for benefits and overhead for the \$12,418 adjustment is \$20,017.

Contractor Overtime

The only contractors involved on the project performed environmental testing to respond to concerns about oil that leaked from the old transformers. The reuse of existing foundations avoided the need for sub-grade work and ComEd forces did the conduit work. ComEd personnel performed virtually all of the work on this project, and there were no contractor overtime issues.²¹⁶

²¹⁵ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

²¹⁶ Interview #42-9.

Woodstock Transformer Project

Adjustment Summary

ComEd placed the Woodstock project into service during 2001, and included in its proposed DST rate base a cost of \$2,852,794.²¹⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
True-up to actual costs as of 6/30/01	\$(152,054)
Removal of excess ComEd hourly overtime	20,552
Removal of hourly employee-related costs/allocated OH	33,527
Total	\$(97,975)

Background

This project first appeared in ComEd's construction budget in the "1992-1994 Three-Year Plant Construction Program," a computer print-out dated March 2, 1992, as the installation of a third 40 MVA 138-12kV transformer at TSS 151 Woodstock.²¹⁸ That budget print-out shows dollar figures in the immediately following years, which indicates an imminent start of work. However, Liberty learned from its analysis of this and other projects that the construction budgets from that period do not serve as reliable predictors of when projects would actually start.

The documents that ComEd supplied to Liberty did not provide information on what happened to the planned project in the 1990s. In addition, project management personnel that Liberty interviewed did not know the reasons the project was deferred.

The next indication of preparation to undertake this project came in a 1998 document. The document described a budget estimate made in April 1998, as part of a project diagram ("PD"), of \$1.56 million. A later, November 1999 estimate placed the total amount at \$2.2 million. This estimate formed part of an updated project description that showed a planned transformer in-service date of June 1, 2001.²¹⁹

While the project was authorized in 1998, work did not really start until 2000. A ComEd manager explained to Liberty that authorization can mean approval only to proceed to detailed engineering and order placement for long lead-time equipment. Authorization can mean as little as a request for a detailed cost estimate.²²⁰

²¹⁷ Exhibit WPB 2.2b indicated the estimated asset value at completion was \$2,852,794.

²¹⁸ DR 216.

²¹⁹ DR 101, Woodstock planning documents, Tab A.

²²⁰ Interview #42-11.

From the documents that ComEd provided to Liberty it appears that work began in July 2000, with the dual purpose of preventing the 12 percent overload that would come with the outage of a transformer at Woodstock during the summer of 2001, and of providing additional capacity to meet growing demand.²²¹

In June 2000 ComEd assigned a project manager to the project, which at that point still lay in the engineering phase. The project manager wrote that summer 2000 loads at the Woodstock TSS were excessively high, which made a June 2001 in-service date critical. The budget then totaled \$2.2 million. A later budget of \$3.4 million, prepared in October 2000, included other costs including additional bus upgrades, some transmission work, the installation of a firewall around the transformer, and some relaying work.²²² This latest budget estimate reflected the performance of a detailed examination of site requirements. And was the same as the budget presented at a Challenge Meeting conducted in December 2000.²²³

A Project Status Sheet dated June 26, 2001 indicated that the new transformer was placed in service on June 21. Actual expenditures for the project totaled \$2.555 million.

As of January 2002, ComEd had spent \$3.2 million on this project, which was less than the budgeted amount. At project completion, ComEd had paid purchase orders totaling \$1.645 million, which included [REDACTED] to Waukesha for the transformer and [REDACTED] for the switchgear. ComEd awarded a purchase order to Utility & Industrial Construction, a contractor for below-grade work, on November 13, 2000, after receiving quotations from three bidders. U&I offered the lowest bid.²²⁴

Financial closing of the project came in February 2002 because of the need to do some distribution and mapping work. Nevertheless, ComEd had completed all substation work in the fall of 2001.²²⁵

Project Costs

The following table summarizes the costs of the Woodstock project by major category as of June 30, 2001.²²⁶

Woodstock Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$146,839
Hourly - Premium Time	92,981
Salaried - Regular Time	193,039
Salaried - Premium Time	34,805

²²¹ DR 101, Woodstock planning documents, Tab A.

²²² DR s 101 and 221.

²²³ DR s 101 and 221.

²²⁴ DR 101.

²²⁵ Interview #42-11.

²²⁶ DR 507. Figures represent balance in account 107 as of June 30, 2001.

Materials	1,248,531
Services/Contractors	383,883
Other	216,785
AFUDC, etc	135,143
Overheads	290,347
Employee Overhead Costs	262,495
Final Total	\$3,004,848

ComEd used an estimated cost at completion for the purposes of preparing its filing. For those projects that ComEd expected to be placed in service during the second quarter of 2001, Liberty considers the actual costs incurred through June 30, 2001 as the proper measure of eligibility for inclusion in distribution rate base. Liberty therefore recommends an upward adjustment of \$152,054.²²⁷

ComEd Employee Overtime

The amount of ComEd craft overtime used on the Woodstock project was roughly 30 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$20,552. The concomitant adjustment for benefits and overhead for the \$20,552 adjustment is \$33,527.

Contractor Overtime

The main contractor on the Woodstock project, Utility and Industrial, completed work under a lump sum contract for a total cost of \$234,450. Liberty found no excess contractor overtime on the project.²²⁸

²²⁷ This adjustment is consistent with adjustment proposed by Staff and adopted by the Commission. See Interim Order p. 44, and Staff Data Request GEG 1.01.

²²⁸ DR 567.

Ridgeland Project

Adjustment Summary

ComEd placed the Ridgeland projects into service during 1997, and included in its proposed DST rate base a cost of \$6,902,116.²²⁹ Liberty has recommended no adjustments to the claimed amount.

Background

The Ridgeland project included installing the third 200 MVA transformer (which actually consisted of three 66.7 MVA transformers) and other associated equipment such as circuit breakers, disconnects, bus work, conductors, and protective equipment at Ridgeland TSS 192.²³⁰

The objective of the project was to make it possible to transfer supply to Columbus Park and retire and remove old 69 kV transformers and associated equipment at the Crawford and Fisk stations. Project diagrams (“PDs”) provided to Liberty noted that the retirement of the 69kV bus at Fisk Station was “. . . an interim step in the overall retirement of the Jefferson-Ridgeland 69 kV system.”²³¹

The documents that ComEd provided were incomplete in their description of the need for the project and how ComEd managed its execution. Liberty found such gaps surprising. The earliest document that ComEd provided to Liberty showed the first discussion of the project to be in October 1986.²³² The Company issued the original project description for this project in 1991. It listed a needed in-service date of March 1, 1993 and an estimated cost of about \$5.7 million.²³³ ComEd reissued the PD several times to document changes. One such change, in March 1996, showed an in-service date of May 1997.²³⁴ A note included in the files provided to Liberty and dated January 7, 1992 suggested project cancellation because of budget problems. The note projected the savings from cancellation at \$6.5 million, which reflected a higher than budgeted amount because the planner projected higher transformer costs.²³⁵

The project apparently started in late 1996, although ComEd did not provide definitive information about the start date.²³⁶ The project manager stated that transformer installation and placement into service came in 1997.

According to the ComEd personnel directly responsible for managing the project, the difference between the original project as designed in the first PD of 1991 and the actual work performed resulted from the need to perform extensive demolition work.²³⁷

²²⁹ DR 283, project IDs A11300 (200MVA transformer) and Z11302 (138/69kV line).

²³⁰ DR 24, Bates number A0007864-5.

²³¹ DR 101.

²³² DR 101.

²³³ DR 24, Bates number A0007864-5, PD 91-12.

²³⁴ DR 492.

²³⁵ DR 101.

²³⁶ Interview #42-17.

The contractor Utility and Industrial Construction (“U&I”) performed the foundation work. ComEd typically does not itself do sub-grade work. Company forces, however, did undertake substation construction. The documents that ComEd provided indicated a purchase requisition with U&I for \$694,471.²³⁸ The documentation included a bid-summary sheet showing that, among bids from five vendors, U&I’s was the lowest.²³⁹

Project Costs

In conjunction with its review of the Ridgeland transformer project discussed above, Liberty also reviewed the project costs associated with the 138/69kV underground transmission work accomplished at the site. The following table summarizes the combined costs of both Ridgeland projects by major category as of December 31, 2000.²⁴⁰

Ridgeland Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$1,069,769
Hourly - Premium Time	17,692
Salaried - Regular Time	57,527
Salaried - Premium Time	2,553
Materials	1,587,274
Services/Contractors	7,410
Other	2,661,503
AFUDC, etc	141,100
Overheads	657,604
Employee Overhead Costs	699,686
Final Total	\$6,902,116

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the Ridgeland project was less than 10 percent. Therefore, no adjustment is required.

²³⁷ Interview #42-17.

²³⁸ DR 101.

²³⁹ DR 101.

²⁴⁰ DR 507. Figures represent balance in account 106 as of December 31, 2000 for project IDs A11300 and Z11302.

Contractor Overtime

ComEd was unable to provide manpower information for contractors on the Ridgeland project, and thus Liberty was unable to determine whether there was contractor overtime in excess of 20 percent.²⁴¹ According to ComEd, Fluor Daniel also provided contract services on the project, but no overtime charges were incurred as part of the charges.²⁴² The in-service date for the project substantially preceded the accelerated work of the 1999 to 2001 period, and Liberty has no other basis for believing that contractor overtime was above acceptable levels.

SMIT Transformers and G&W Electric were the primary equipment suppliers for the project, and received payments totaling approximately \$2.0 million.²⁴³

²⁴¹ DR 567.

²⁴² DR 780. ComEd also stated that costs for contracting and materials pre-1998 were typically charged to resource type "Other" when the costs were moved to the new CBMS accounting system.

²⁴³ DR 796.

Sandwich Substation

Adjustment Summary

ComEd placed the Sandwich project into service during 2000, and included in its proposed DST rate base a cost of \$10,496,486.²⁴⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$81,144
Removal of hourly employee-related costs/allocated OH	86,751
Total	\$167,895

Background

The Sandwich project was an off-and-on project that ComEd first proposed in the early 1990s, but did not complete until 2000. The project included the installation of a second 40 MVA transformer at the site for 138-34kV conversion, as well as five miles of single circuit 138kV line and four miles of 34kV line. The project justification was to improve service reliability to customers by preventing low voltage and/or a loss of the transformer at Sandwich.

The Sandwich project was included in the 1991 to 1995, 1992 to 1994, and 1993 to 1995 capital programs at \$6.4 million, \$6.2 million, and \$5.7 million, respectively. In each capital program, the priority for the project was “B,” *i.e.*, lower priority, and ComEd listed the service date as June 1995. By the 1994 to 1996 capital budget, however, ComEd authorized \$5.76 million for the project, and the approved project had a scheduled completion date of June 1995.²⁴⁵ However, ComEd did not build the project in this time period.

In 1993, the project was seemingly delayed for one year for budget constraint reasons. In March 1993, ComEd Planning wrote a memo informing the appropriate parties that due to substantial budget cutbacks, Sandwich would be delayed to June 1, 1995.²⁴⁶ This memo is not consistent with the capital budget programs described above, which had stated the target service date as 1995. Sandwich project management speculated that other reasons for the delay of the project could have been that a revised route caused a difference in mileage, which may have caused delays, and that loads may not have materialized. ComEd project management represented that ComEd’s goal was often to load up substations to the maximum, *i.e.*, the point to where they still had a first contingency without outages.²⁴⁷

²⁴⁴ Figures represent the sum of amounts from DR 283, DR 177 (p. 2 of 18), and DR 599 Supplement 2 Appendix B for the following project IDs: A06372, A06501, A06503, and K06501.

²⁴⁵ DR 216, Bates numbers A0024197, A0023755, A0023870, and A0023976.

²⁴⁶ DR 101, Sandwich box.

²⁴⁷ Interview #42-12.

ComEd revised the Sandwich project diagram in 1997 to include changes in the project scope, as well as a new service date of June 1999.²⁴⁸ The new estimate, performed in June 1998, also included transmission line work and substation work at Waterman TSS 113 as part of the project. ComEd also revised transmission line costs. The project estimate totaled \$7.33 million.²⁴⁹

ComEd petitioned for a Certificate of Convenience and Necessity for the Sandwich transmission line in January 1998. ComEd Planning testified before the ICC to get approval for the transmission line. In the testimony, ComEd described why the transmission line was necessary – without reinforcement there would be overloads and low voltage for certain contingency conditions, such as an outage of a 138 or 34kV line or transformer. The ICC approved ComEd's request in November 1998, and construction started that month.²⁵⁰ An e-mail in August 1998 indicated that overloads would occur in the area with only a first contingency situation.²⁵¹ A 1999 to 2001 Capital Budget document shows that approximately \$10.3 million was authorized for the Sandwich project, \$7.76 million in 1999 and \$2.5 million in 2000.²⁵²

The Sandwich site also had a planned expenditure of about \$2.4 million for feeders that went into service in 2000. That installation of feeders was not covered by Liberty's review.²⁵³

Overall, the Sandwich substation project was delayed by about five years. The Sandwich project was delayed one year, from a 1994 to 1995 service date, due specifically to budget constraints. Even though project funds were authorized for 1994 and 1995, the project did not proceed, likely in a continuation of budget constraints. The project was desperately needed by 1999, as outages were projected to occur on only a first contingency situation. Liberty has concluded that this project should have been completed in 1995.

Project Costs

The following table summarizes the costs of the Sandwich project by major category as of December 31, 2000.²⁵⁴

Sandwich Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$717,637
Hourly - Premium Time	390,086
Salaried - Regular Time	338,994
Salaried - Premium Time	29,801

²⁴⁸ DR 101.

²⁴⁹ DR 101.

²⁵⁰ Interview #42-12.

²⁵¹ DR 101.

²⁵² DR 101, Bates number A0035735.

²⁵³ ComEd provided personnel knowledgeable only about the Sandwich substation work during the interview with Liberty.

²⁵⁴ DR 507. Figures represent balance in account 106 as of December 31, 2001.

Materials	3,468,135
Services/Contractors	1,343,907
Other	1,801,389
AFUDC, etc	694,074
Overheads	920,700
Employee Overhead Costs	767,005
Final Total	\$10,496,486

ComEd Employee Overtime

ComEd craft overtime on the Sandwich project was 27 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$81,144. The concomitant adjustment for benefits and overhead for the \$81,144 adjustment is \$86,751.

Contractor Overtime

The main contractors on the project were M.J. Electric and Tri-State Drilling, both of which provided services under lump sum contracts. ComEd was unable to provide manpower information for its contractors during 1999, when work on this project was done. Thus, Liberty was unable to calculate any necessary adjustments.²⁵⁵

Delta Star and Patten Industries were the primary equipment suppliers for the project, and received payments totaling approximately \$0.6 million.²⁵⁶

²⁵⁵ DR 567.

²⁵⁶ DR 796.

East Rockford Transformer Project

Adjustment Summary

ComEd placed the initial East Rockford 20 MVA transformers into service during 1998 and 1999, and included in its proposed rate base a cost of \$2,850,946.²⁵⁷ ComEd placed the East Rockford transformer upgrade project into service during 2001, and included in its proposed DST rate base a cost of \$1,533,842.²⁵⁸ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$3,689
Removal of hourly employee-related costs/allocated OH	5,494
Total	\$9,183

Background

ComEd included the East Rockford substation work, which included transformers, a transmission line, and distribution lines, in its authorized budget for 1994 and 1995. By September 1994, the Company had spent \$3.0 million on the substation. ComEd planned to have the initial two 20 MVA transformers at the site in service by June 1995, but delayed them by about four years.²⁵⁹ ComEd energized the first 20 MVA transformer in 1998 and the second 20 MVA transformer in 1999.²⁶⁰ The project was among those reclassified as distribution in 1999.

The replacement of the 20 MVA transformers with 40 MVA, 138-12.5kV transformers was planned and executed during the 2000 to 2001 reliability remediation period.²⁶¹ A ComEd project document indicated that, without the upgrade, the Company would experience projected overloads in 2001 of 2 percent, 9 percent and 4 percent at East Rockford, Sand Park and Belvedere, respectively. A Project Diagram Justification dated May 5, 2000 estimated the upgrade cost at \$1.5 million.²⁶²

No civil work was needed for the upgrade project, and the engineering phase began in August 2000. There were no major problems noted in the status reports, and due to scheduling and available resources, the first transformer was in service (carrying customer load) in December 2000 and the second transformer was in service by March 2001, both ahead of schedule.²⁶³

²⁵⁷ DRs 690 and 177 for project ID A11239.

²⁵⁸ Exhibit WPB 2.2a indicated the CWIP value as of March 31, 2001 was \$1,533,842; the in-service date was shown as December 2000 for the first transformer and March 2001 for the second transformer.

²⁵⁹ DR 216.

²⁶⁰ Interview #42-15.

²⁶¹ The 20 MVA transformers were later installed at another station for reuse for the summer of 2002.

²⁶² DR 101.

²⁶³ Interview # 42-15.

Project Costs

The following table summarizes the costs of the original 20 MVA transformer project by major category as of December 31, 2000.²⁶⁴

East Rockford 20 MVA Transformer Project Costs

Cost Category	Amount
Hourly - Regular Time	\$443,413
Hourly - Premium Time	71,325
Salaried - Regular Time	133,185
Salaried - Premium Time	15,777
Materials	504,901
Services/Contractors	20,578
Other	986,037
AFUDC, etc	107,680
Overheads	223,066
Employee Overhead Costs	344,982
Final Total	\$2,850,946

The following table summarizes the costs of the East Rockford transformer upgrade project by major category as of March 31, 2001.²⁶⁵

East Rockford 40 MVA Transformer Project Costs

Cost Category	Amount
Hourly - Regular Time	\$88,964
Hourly - Premium Time	27,125
Salaried - Regular Time	49,399
Salaried - Premium Time	3,740
Materials	1,060,644

²⁶⁴ DR 784. Figures represent balance in account 106 as of December 31, 2000.

²⁶⁵ DR 507. Figures represent balance in account 107 as of March 31, 2001.

Services/Contractors	22,261
Other	107,453
AFUDC, etc	31,182
Overheads	84,437
Employee Overhead Costs	58,237
Final Total	\$1,533,842

ComEd Employee Overtime

The amount of craft and salaried overtime used on the initial transformer installation project was less than 10 percent, and Liberty has proposed no adjustment. The amount of ComEd craft overtime used on the East Rockford transformer upgrade project was roughly 17 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$3,689. The concomitant adjustment for benefits and overhead for the \$3,689 adjustment is \$5,494.

Contractor Overtime

According to information provided by ComEd, the primary contractors on the first East Rockford transformer project were Sargent & Lundy and ABB, both of which provided engineering services in 1992 and 1993 under a time and materials arrangement. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.²⁶⁶

ComEd made no significant use of contractors at East Rockford upgrade project, and Liberty has not recommended an adjustment.

²⁶⁶ DR 794. The cost for these contractors was reflected in resource type "Other."

East Rockford 138kV Line

Adjustment Summary

ComEd placed the East Rockford 138kV line projects into service during 1998 and 1999, and included in its proposed DST rate base a cost of \$3,998,179.²⁶⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$12,175
Removal of hourly employee-related costs/allocated OH	15,734
Total	\$27,909

Background

ComEd included the East Rockford substation work, which included transformers (discussed in the East Rockford Transmission Project summary), a transmission line, and distribution lines, in its authorized budget for 1994 and 1995.

The ICC approved the Company's filing for certification of the transmission line in 1997.²⁶⁸ The East Rockford 138kV transmission line was completed during 1998 and 1999.

Project Costs

The following table summarizes the costs of the East Rockford line project by major category as of December 31, 2000.²⁶⁹

East Rockford 138kV Line Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$119,041
Hourly - Premium Time	60,425
Salaried - Regular Time	81,577
Salaried - Premium Time	1,231
Materials	1,599,546
Services/Contractors	562,322

²⁶⁷ DR 283 for project ID A06364.

²⁶⁸ ICC Order in Docket No. 96-0196.

²⁶⁹ DR 507. Figures represent balance in account 106 as of December 31, 2000.

Other	705,655
AFUDC, etc	261,623
Overheads	404,402
Employee Overhead Costs	202,357
Final Total	\$3,998,180

ComEd Employee Overtime

ComEd craft overtime on the East Rockford line project was 25 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$12,175. The concomitant adjustment for benefits and overhead for the \$12,175 adjustment is \$15,734.

Contractor Overtime

The main contractors on the project were M.J. Electric and Tri-State Drilling, both of which provided services under lump sum contracts. ComEd was unable to provide manpower information for its contractors during 1998 and 1999, when work on this project was done. Thus, Liberty was unable to calculate any necessary adjustments.²⁷⁰

²⁷⁰ DR 567.

Warrenville Substation Project

Adjustment Summary

ComEd placed the Warrenville substation project into service during 1999, and included in its proposed DST rate base a cost of \$11,606,064.²⁷¹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$24,455
Removal of hourly employee-related costs/allocated OH	31,603
Removal of excess ComEd salaried overtime	2,430
Removal of salaried employee-related costs/allocated OH	3,140
Total	\$61,628

Background

The Warrenville substation project was a new site construction project to meet load growth needs in the western Chicago suburbs. The substation construction was delayed several times for siting and public objection reasons.

The initial need for the Warrenville substation was identified back in the mid 1980s. An early project from 1985 shows a plan that calls for the creation of a Warrenville TDC with a planned future extension to Weisbrook, which would create two TDCs – what ComEd believed would be necessary to support the load in the area.²⁷²

Approval was requested and granted in September 1990 for the Wiesbrook TDC 540 (Budget 3123) for \$10.6 million to install two 40 MVA transformers and 6.5 miles of transmission line, and to reconfigure 34kV distribution facilities in the area. The planning date for this project was June 1, 1992, but the budget had a low priority designation.²⁷³

The Weisbrook project was delayed in the early 1990s due to public opposition from intervenors who did not want ComEd to build near the Prairie Path trail. Also, delayed construction of the Cantera development meant that the load would not increase as originally expected. The Prairie Path lies in an area along the tracks from the old trolley that went into the Chicago Loop in the early 1900s from the Wheaton area. ComEd originally donated this area to Wheaton, and it is now paved with limestone and is used by the public for recreation purposes.²⁷⁴

²⁷¹ Figures represent the sum of amounts from DR 283, DR 177, and DR 599 Supplement 2 Appendix B for the following project IDs: A06361, A11233 and F06512.

²⁷² DR 101, Warrenville box.

²⁷³ DR 216, Bates numbers A0009127 and A0009128.

²⁷⁴ Interview #42-19.

ComEd eventually determined that two TDCs would not be necessary – the Warrenville TDC alone would be adequate. Based on this new requirement of only one TDC, the initial concept for the station was driven by two factors: (1) expected load growth in the nearby Cantera and Donata developments, which were being built at this time, and (2) reliability issues due to tree trimming restrictions in Wheaton. In addition, the project was meant to prevent transformer overloads at the West Chicago and Electric Junction stations.²⁷⁵

By the mid 1990s, it became apparent that area loads would increase in the Cantera area, as the development that was delayed for a few years prior was underway. ComEd began planning for the Weisbrook TDC again. In the 1994 to 1996 capital program, Weisbrook was shown as an authorized project, with a new cost estimate of \$14.2 million and an in-service date of June 1996.²⁷⁶ In June 1995, the project name was changed to Warrenville TDC 539 from Wiesbrook TDC 540; ComEd was unable to secure the land required in Wiesbrook and Warrenville was chosen as the location for the new substation.²⁷⁷

In 1996, a revised project diagram called for the Warrenville TDC to be built as a Modular Concept Station, which required installation of two 40 MVA transformers and 12 feeder positions. An additional two 40 MVA transformers could be installed in the future. A request was submitted and approved to increase Budget 3123 to \$15.020 million, which included increases that resulted from the construction delay and the change in location of the substation. The purchase price of the Warrenville site was included in this budget. The scheduled service date was September, 1998.²⁷⁸ The breakdown of the project approval was as follows:²⁷⁹

Transmission Distribution Center	\$4.185 million
Transmission Distribution Center site	\$1.520 million
Transmission line	\$3.855 million
Distribution line	\$5.460 million

Without the distribution line, the approved project cost was \$9.560 million.²⁸⁰

The public objections to building the substation in Warrenville began when ComEd activated the project again. The Prairie Path Organization objected to the installation near the Prairie Path of the 6.5 miles of overhead transmission line that would connect the substation to Electric Junction. Wheaton, a nearby city, changed their tree trimming laws to help with reliability issues and put pressure on Warrenville to allow the project. In the end, ComEd reconfigured the setup of the substation on the site and located the control building away from the Prairie Path.²⁸¹

Construction started on January 1, 1998, and the concept substation design shortened the construction period. ComEd placed the substation in service on June 4, 1998. Longer feeder lines

²⁷⁵ Interview #42-19.

²⁷⁶ DR 101.

²⁷⁷ DR 101.

²⁷⁸ DR 101.

²⁷⁹ DR 101.

²⁸⁰ ComEd's documentation on the project precludes comparing estimates to actual expenditures. ComEd's approval documents for the project did not designate project IDs, therefore the components of the approvals cannot be matched to actual cost information.

²⁸¹ Interview #42-19.

were necessary than were expected when the project was supposed to be in Wiesbrook. In addition, ComEd incurred incremental transmission costs because of 34kV interfaces at Electric Junction, which increased estimates of distribution and transmission line costs.

The Warrenville/Wiesbrook project was delayed by several years due to public siting problems. The project was delayed repeatedly due to public resistance to the proposed location of high voltage lines. While the timing of the delay coincides with the period that ComEd was minimizing distribution capital spending, Liberty found no clear evidence that budget constraints were a reason for delay.

Project Costs

The following table summarizes the costs of the Warrenville substation project (transmission distribution center, site and transmission line) by major category as of December 31, 2000.²⁸²

Warrenville Substation Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$192,603
Hourly - Premium Time	113,617
Salaried - Regular Time	103,616
Salaried - Premium Time	25,369
Materials	1,665,304
Services/Contractors	1,957,169
Other	5,644,996
AFUDC, etc	265,494
Overheads	1,170,881
Employee Overhead Costs	467,016
Final Total	\$11,606,065

ComEd Employee Overtime

ComEd craft overtime on the Warrenville project was almost 30 percent, and salaried overtime was approximately 14 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$24,455 and \$2,430, respectively. The concomitant adjustments for benefits and overhead for the \$24,455 and \$2,430 adjustments are \$31,603 and \$3,140, respectively.

²⁸² DR 507. Figures represent balance in account 107 as of June 30, 2001 plus pre-1998 spending.

Contractor Overtime

ComEd was unable to provide manpower information for contractors on the Warrenville project, and thus Liberty was unable to determine whether there was contractor overtime in excess of 20 percent.²⁸³ According to ComEd, Tri-State Drilling provided contract services on the project, but no overtime charges were incurred as part of the charges.²⁸⁴

L.E. Meyers, Square D and Summit Manufacturing were the primary equipment suppliers on the project, and received payments totaling approximately \$1.4 million.²⁸⁵

²⁸³ DR 567.

²⁸⁴ DR 780. ComEd also stated that costs for contracting and materials pre-1998 were typically charged to resource type "Other" when the costs were moved to the new CBMS accounting system.

²⁸⁵ DR 796.

Warrenville Distribution Line Project

Adjustment Summary

ComEd placed the Warrenville Distribution Line project into service during 2000, and included in its proposed DST rate base a cost of \$3,802,938.²⁸⁶ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$6,505
Removal of hourly employee-related costs/allocated OH	6,955
Total	\$13,460

Background

The Warrenville Distribution Line project involved the installation of 12kV conduit and cable. The Company provided very little detailed information on this project. Liberty could not determine whether ComEd had planned the project previously, what the estimated cost for the project totaled, or when it expected to place the line in service.²⁸⁷

Project Costs

The following table summarizes the costs of the Warrenville Distribution Line project by major category as of December 31, 2000.²⁸⁸

Warrenville Distribution Line Project Costs

Cost Category	Amount
Hourly - Regular Time	\$237,836
Hourly - Premium Time	61,323
Salaried - Regular Time	22,524
Salaried - Premium Time	2,368
Materials	1,300,718
Services/Contractors	345,487

²⁸⁶ DR 447.

²⁸⁷ The Company provided limited information in DR 447, including a series of drawings ostensibly related to the manhole and conduit system, and a list of work orders, one of which the Company stated was related to this project.

²⁸⁸ DR 566. Figures represent balance in account 106 as of December 31, 2000.

Other	1,070,377
AFUDC, etc	420,483
Overheads	214,126
Employee Overhead Costs	127,697
Final Total	\$3,802,938

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 15 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$6,505. The concomitant adjustment for benefits and overhead for the \$6,505 adjustment is \$6,955.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Benchmark Construction, which provided conduit and manhole construction services during 1998 and received payments totaling roughly \$1.0 million. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.²⁸⁹

²⁸⁹ DR 795. It appears that some of these costs may have been recorded under resource type "Other," since the total paid to Benchmark Construction is greater than amount under resource types "Services/Contractors."

South Pecatonica Project

Adjustment Summary

ComEd placed the South Pecatonica project into service during 2001, and included in its proposed DST rate base a cost of \$1,345,730.²⁹⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$15,510
Removal of hourly employee-related costs/allocated OH	16,593
Removal of excess ComEd salaried overtime	1,396
Removal of salaried employee-related costs/allocated OH	1,492
Total	\$34,991

Background

ComEd's system optimization program included the South Pecatonica project, which involved a site purchase, installation of one 10 MVA transformer, a new feeder, and related switching equipment to support a new South Pecatonica station. ComEd committed to the project in order to correct a 14 percent normal overload on the single 10 MVA transformer at the existing Pecatonica substation site. Project planning began in 2000. Liberty saw no evidence that the project had been planned or authorized previously.

The February 2000 estimated cost for the project totaled \$0.75 million, with an expected in-service date of June 2000. The Company delayed the project, however, due to weather, site conditions and difficulties with attaining property rights.²⁹¹ Actual costs were nearly twice the original estimate.

Project Costs

The following table summarizes the costs of South Pecatonica by major category as of March 30, 2001.²⁹²

South Pecatonica Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$135,335

²⁹⁰ Exhibit WPB 2.2a indicated the CWIP value as of March 31, 2001 was \$1,345,730, with service date shown as March 30, 2001.

²⁹¹ DR 399.

²⁹² DR 599 Supplement 2. Figures represent balance in account 107 as of March 31, 2001.

Hourly - Premium Time	74,255
Salaried - Regular Time	53,717
Salaried - Premium Time	13,607
Materials	258,606
Services/Contractors	417,678
Other	62,674
AFUDC, etc	60,764
Overheads	154,115
Employee Overhead Costs	114,981
Final Total	\$1,345,730

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 27 percent, and salaried overtime was approximately 15 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$15,510 and \$1,396, respectively. The concomitant adjustments for benefits and overhead for the \$15,510 and \$1,396 adjustments are \$16,593 and \$1,492, respectively.

Contractor Overtime

The main contractor on the South Pecatonica project, Utility and Industrial, completed civil work under a firm price contract for a total cost of approximately \$300,000. Liberty found no excess contractor overtime on the project.²⁹³

²⁹³ DR 797.

Crystal Lake Project

Adjustment Summary

ComEd placed the Crystal Lake project into service during 1999 and 2000, and included in its proposed DST rate base a cost of \$1,619,600.²⁹⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$14,105
Removal of hourly employee-related costs/allocated OH	18,061
Total	\$32,166

Background

Crystal Lake constituted one of ComEd's system optimization projects. It involved the installation of a fourth 40 MVA 138-12.5kV transformer, associated structures, busses and breakers at Crystal Lake. ComEd planned the project to prevent a 6 percent transformer overload that could not be relieved through switching. Project planning began in 1996. Liberty saw no evidence of prior project planning or authorization.

The estimated cost for the project as of March 1997 totaled \$1.74 million; the actual cost of the project came in slightly lower.

Project Costs

The following table summarizes the costs of the Crystal Lake project by major category as of December 31, 2000.²⁹⁵

Crystal Lake Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$101,992
Hourly - Premium Time	64,015
Salaried - Regular Time	78,017
Salaried - Premium Time	11,039
Materials	946,216

²⁹⁴ Of the total, \$1,588,617 was included in 1999 capital additions (see DR 431) and \$30,983 was included in 2000 capital additions (see DR 177, p. 6 of 18).

²⁹⁵ DR 566. Figures represent balance in account 106 as of year-end 2000.

Services/Contractors	15,117
Other	124,250
AFUDC, etc	0
Overheads	134,136
Employee Overhead Costs	144,819
Final Total	\$1,619,600

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 30 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$14,105. The concomitant adjustment for benefits and overhead for the \$14,105 adjustment is \$18,061.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.²⁹⁶

²⁹⁶ DR 795.

University Project

Adjustment Summary

ComEd placed the University project into service during 2000, and included in its proposed DST rate base a cost of \$3,508,075.²⁹⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$54,623
Removal of hourly employee-related costs/allocated OH	58,398
Total	\$113,021

Background

The Chicago Franchise Agreement included this project. University, which formed part of the Company's system optimization program, involved installing a third 50 MVA transformer, associated 12.5kV switchgear, and a circuit switcher.

The Company originally estimated a cost of \$3.2 million for University in 1992, and authorized it in the 1993 to 1995 three-year budget.²⁹⁸ The stated purpose of the project at that time was to prevent a 9 percent overload for a transformer outage at University TSS for the summer of 1994, and to provide additional reliability in the area. ComEd completed the foundation, conduit and ventilation duct work in 1993, then deferred the project.²⁹⁹ The Company began work again in 1998 under a scope much like that of the project in 1992.³⁰⁰ ComEd's files do not show substantial reason for delaying University's completion past the originally planned year-end 1996.

According to project meeting summaries, the estimated cost for the project as of August 1998 totaled \$2.4 million, with an expected in-service date of 1999. The actual costs of the project were appreciably higher than the revised estimate, and were closer to the costs envisioned in the original 1992 plan.

²⁹⁷ DR 447.

²⁹⁸ DR 447, Bates numbers A0055566 and A0055607-10. A Request for Plant Approval dated May 11, 1992 and a project status report dated August 31, 1999 indicated that the project was to have been installed in 1992. The project was not shown as approved in the 1992 to 1994 capital budget, but did appear as an authorized project in the 1993 to 1995 budget (with completion in 1996).

²⁹⁹ DR 447, Bates number A0055796.

³⁰⁰ However, the original plan had envisioned moving a spare transformer from Crawford, which proved not to be feasible. The Company used a transformer from Ridgeland instead.

Project Costs

The following table summarizes the costs of the University project by major category as of December 31, 2000.³⁰¹

University Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$351,821
Hourly - Premium Time	240,715
Salaried - Regular Time	216,567
Salaried - Premium Time	18,870
Materials	1,045,029
Services/Contractors	205,451
Other	649,269
AFUDC, etc	38,208
Overheads	350,259
Employee Overhead Costs	391,886
Final Total	\$3,508,075

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was over 30 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$54,623. The concomitant adjustment for benefits and overhead for the \$54,623 adjustment is \$58,398.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Fluor, which provided engineering services under a time and materials contract during 1992 to 1994 and received payments totaling roughly \$300,000. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.³⁰²

³⁰¹ DR 566. Figures represent balance in account 106 as of December 31, 2000.

³⁰² DR 795. It appears that some of these costs may have been recorded under resource type "Other," since the total paid to Fluor is greater than amount under resource types "Services/Contractors."

Tinley Park Project

Adjustment Summary

ComEd placed the Tinley Park project into service during 2000, including in its proposed rate DST base a cost of \$1,525,560.³⁰³ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$18,677
Removal of hourly employee-related costs/allocated OH	19,968
Removal of excess ComEd salaried overtime	454
Removal of salaried employee-related costs/allocated OH	485
Total	\$39,584

Background

Tinley Park project constituted one of ComEd's system optimization projects, and involved testing substation exit cables and replacing cables that failed the tests. Liberty found no information regarding prior project planning or authorization. ComEd's planning group did not engineer the project and the files disclosed no original estimate of cost.³⁰⁴

Project Costs

The following table summarizes the costs of the Tinley Park project by major category as of December 31, 2000.³⁰⁵

Tinley Park Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$159,123
Hourly - Premium Time	88,766
Salaried - Regular Time	29,422
Salaried - Premium Time	6,417
Materials	580,726

³⁰³ DR 447.

³⁰⁴ DR 447.

³⁰⁵ DR 566. Figures represent balance in account 106 as of year-end 2000.

Services/Contractors	160,534
Other	183,525
AFUDC, etc	36,972
Overheads	122,127
Employee Overhead Costs	157,948
Final Total	\$1,525,560

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 30 percent and salaried overtime was approximately 12.5 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$18,677 and \$454, respectively. The concomitant adjustments for benefits and overhead for the \$18,677 and \$454 adjustments are \$19,968 and \$485, respectively.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Utilx, which provided directional boring services under a unit pricing arrangement in 1999 and received payments totaling roughly \$125,000. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.³⁰⁶

³⁰⁶ DR 795.

Downers Grove Project

Adjustment Summary

ComEd placed the Downers Grove feeder project in service during 1999 and 2000, and included in its proposed DST rate base a cost of \$2,218,516.³⁰⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$8,691
Removal of hourly employee-related costs/allocated OH	9,310
Total	\$18,001

Background

The Downers Grove project involved the installation of a new feeder out of the Downers Grove TDC to provide relief for nearby stations and feeders. Project planning began in late 1999. ComEd documents showed no evidence that ComEd had planned or authorized the new feeder previously.³⁰⁸

The estimated cost for the project as of October 1999 totaled \$1.6 million. Final expenditures on the project ran somewhat higher.

Project Costs

The following table summarizes the costs of the Downers Grove project by major category as of December 31, 2000.³⁰⁹

Downers Grove Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$67,287
Hourly - Premium Time	40,183
Salaried - Regular Time	37,497
Salaried - Premium Time	6,498
Materials	492,950

³⁰⁷ Of the total, \$42,979 was included in 1999 capital (see DR 431) and \$2,218,516 was included in 2000 capital (see DR 177).

³⁰⁸ DR 447.

³⁰⁹ DR 566. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	1,358,769
Other	94,013
AFUDC, etc	5,152
Overheads	90,224
Employee Overhead Costs	68,874
Final Total	\$2,261,446

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 30 percent, and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$8,691. The concomitant adjustment for benefits and overhead for the \$8,691 adjustment is \$9,310.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Reliable Contracting, which provided conduit and manhole construction services under a firm price arrangement during 2000 and received payments totaling roughly \$1.3 million. ComEd experienced some delay in beginning the project because of permitting issues. ComEd's contractor on the project, Reliable Contracting, noted in a letter to ComEd that it would require overtime, as well as other extra costs, to finish on time.³¹⁰ ComEd was unable to provide manpower information for this contractor, thus Liberty was unable to calculate any necessary adjustments.³¹¹

³¹⁰ DR 447, Bates numbers A0056411-14. The letter indicated that the contractor was working six 10-hour days per week, and that extra costs would be required for concrete and dumping work performed on Saturdays.

³¹¹ DR 795.

Cary Project

Adjustment Summary

ComEd placed the improvements at Cary into service during 2000, and included in its proposed DST rate base a cost of \$3,187,021.³¹² Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$14,651
Removal of hourly employee-related costs/allocated OH	15,663
Removal of excess contractor costs – M.J. Electric	13,022
Total	\$43,336

Background

The Cary project involved installing a second 40 MVA transformer, circuit switcher, and circuit breakers at Cary TDC. According to ComEd planning documents, this reinforcement would prevent low voltage problems at Cary in case of an outage of the 34kV source from Crystal Lake TSS. It was also required to provide relief for a Fox River Grove overload of 11 percent under normal conditions for the summer of 1999 and capacity relief in the event of a 34.5-12.5kV transformer outage at Cary.³¹³

The estimated cost for the project as of May 1998 totaled \$2.73 million, which the Company revised to \$2.98 million in November 1998.³¹⁴ Actual expenditures on the project ran slightly higher.

Project Costs

The following table summarizes the costs of the Cary project by major category as of December 31, 2000.³¹⁵

Cary Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$103,812
Hourly - Premium Time	66,138
Salaried - Regular Time	163,685

³¹² DR 283 for project ID 102465.

³¹³ DR 598, Bates numbers A0074580-81.

³¹⁴ DR 598, Bates number A0074582 and A0074585-86.

³¹⁵ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Salaried - Premium Time	23,880
Materials	1,294,773
Services/Contractors	1,011,034
Other	187,942
AFUDC, etc	0
Overheads	179,191
Employee Overhead Costs	156,565
Final Total	\$3,187,021

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 30 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$14,651. The concomitant adjustment for benefits and overhead for the \$14,651 adjustment is \$15,663.

Contractor Overtime

The main contractors on the project were M.J. Electric, working on a time and materials basis, and Utility and Industrial Construction (“U&I”), working under a lump sum contract. Manpower information provided by ComEd indicated that M.J. Electric worked roughly 50 percent overtime.³¹⁶ Liberty therefore recommends a downward adjustment of \$13,022 to adjust the charges to reflect 20 percent overtime.³¹⁷ ComEd provided no manpower information for U&I, thus Liberty could not calculate any necessary adjustment for this contractor.

³¹⁶ DR 783.

³¹⁷ Liberty’s method to calculate overtime adjustments for contractors is discussed elsewhere in this chapter.

Goose Lake Project

Adjustment Summary

ComEd placed Goose Lake substation improvements into service during 2000, and included in its proposed DST rate base a cost of \$1,757,246.³¹⁸ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$3,139
Removal of hourly employee-related costs/allocated OH	3,356
Removal of excess ComEd salaried overtime	894
Removal of salaried employee-related costs/allocated OH	956
Total	\$8,345

Background

The Goose Lake project involved the installation of a second 40 MVA 138-34V transformer, an outdoor bus structure, gas circuit breakers, and a bus protective relay scheme at Goose Lake TSS. ComEd provided no information on the justification for the project. The estimated cost for the project as of May 1999 totaled \$1.1 million, which ComEd later revised to \$1.9 million.³¹⁹ Actual costs were slightly lower.

Project Costs

The following table summarizes the costs of the Goose Lake project by major category as of December 31, 2000.³²⁰

Goose Lake Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$32,343
Hourly - Premium Time	15,854
Salaried - Regular Time	107,757
Salaried - Premium Time	20,939

³¹⁸ DR 283 for project ID GOOSE2.

³¹⁹ DR 598, Bates number A0078741 and A0077894.

³²⁰ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000. ComEd mistakenly applied a \$1.2 million credit to resource type 103 (Contractor expense) that should have been applied across other categories as well; this resulted in the negative balance for Services/Contractor expense (DR 782).

Materials	718,993
Services/Contractors	(14,654)
Other	666,720
AFUDC, etc	25,215
Overheads	94,857
Employee Overhead Costs	89,224
Final Total	\$1,757,246

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 25 percent, and salaried overtime was approximately 12 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$3,139 and \$894, respectively. The concomitant adjustments for benefits and overhead for the \$3,139 and \$894 adjustments are \$3,356 and \$956, respectively.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Power Engineers, which provided engineering services under a firm price arrangement and received payments totaling roughly \$200,000. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.³²¹

³²¹ DR 797. ComEd provided information for contractors total \$1.5 million. According to DR 782, ComEd applied a \$1.2 million credit against this amount. Liberty has assumed that the difference was charged correctly to this project.

Zion Project

Adjustment Summary

ComEd placed improvements at the Zion TDC into service during 2000, and included in its proposed DST rate base a cost of \$2,416,266.³²² Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$19,139
Removal of hourly employee-related costs/allocated OH	20,462
Removal of excess ComEd salaried overtime	669
Removal of salaried employee-related costs/allocated OH	715
Total	\$40,985

Background

The Zion project involved installing a second 138-12.5kV transformer, a 12.5kV bus with breakers, and 138kV buses with circuit switchers and breakers at Zion TDC. According to ComEd planning documents, the project was required to prevent a 12 percent overload on DCA 82 and DCA 15 transformers. Absent this reinforcement, the system could not provide relief in the event of an outage of the existing Zion transformer during 2000. The new facilities would also prevent an additional 4.7 percent overload on a 34kV line in the event of an outage at Zion.³²³

The estimated cost for the project as of October 1999 totaled \$1.75 million. Actual expenditures on the project ran considerably higher.³²⁴ According to ComEd documents, problems with a refurbished transformer and other schedule delays necessitated the use of additional overtime to expedite completion of the project.³²⁵

Project Costs

The following table summarizes the costs of the Zion project by major category as of December 31, 2000.³²⁶

³²² DR 283 for project ID T282T2.

³²³ DR 598, Bates number A0076014.

³²⁴ DR 598, Bates numbers A0076012-14.

³²⁵ DR 598, Bates number A0076052.

³²⁶ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Zion Project Costs

Cost Category	Amount
Hourly - Regular Time	\$180,243
Hourly - Premium Time	93,837
Salaried - Regular Time	83,186
Salaried - Premium Time	16,093
Materials	516,900
Services/Contractors	1,093,410
Other	120,058
AFUDC, etc	23,659
Overheads	140,196
Employee Overhead Costs	148,684
Final Total	\$2,416,266

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 26 percent, and salaried overtime was over 11 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$19,139 and \$669, respectively. The concomitant adjustments for benefits and overhead for the \$19,139 and \$669 adjustments are \$20,462 and \$715, respectively.

Contractor Overtime

The main contractors on the project were Sargent & Lundy, Patrick Engineering and Siemens, all of which provided services under lump sum contracts. ComEd was unable to provide manpower information for its contractors, thus Liberty was unable to calculate any necessary adjustments.³²⁷

³²⁷ DR 783.

Hillcrest Project

Adjustment Summary

ComEd placed improvements at the Hillcrest TDC into service during 2000, and included in its proposed DST rate base a cost of \$2,042,409.³²⁸ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$5,902
Removal of hourly employee-related costs/allocated OH	6,310
Total	\$12,212

Background

The Hillcrest project involved installing a fourth 40 MVA transformer, circuit breakers, switchgear buses, and associated bus and feeder relaying at Hillcrest TDC. According to ComEd planning documents, the project was required to prevent a 24 percent transformer overload for the outage of a transformer at the station during the summer of 2000, as well as to provide additional feeder positions necessary for future growth.³²⁹

The estimated cost for the project as of November 1999 totaled \$1.9 million. Actual expenditures on the project proved slightly higher.³³⁰

Project Costs

The following table summarized costs of the Hillcrest project by major category as of December 31, 2000.³³¹

Hillcrest Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$65,624
Hourly - Premium Time	30,609
Salaried - Regular Time	100,052
Salaried - Premium Time	16,286
Materials	1,128,352

³²⁸ DR 283 for project ID HILCR4.

³²⁹ DR 598, Bates number A0077258.

³³⁰ DR 598, Bates numbers A0077339-40.

³³¹ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	384,725
Other	126,053
AFUDC, etc	14,116
Overheads	85,687
Employee Overhead Costs	90,905
Final Total	\$2,042,409

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 24 percent, and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$5,902. The concomitant adjustment for benefits and overhead for the \$5,902 adjustment is \$6,310.

Contractor Overtime

The main contractor on the project was Black & Veatch, which provided design services under a firm price contract and received payments totaling approximately \$275,000. ComEd was unable to provide manpower information for this contractor, thus Liberty was unable to calculate any necessary adjustments.³³²

³³² DR 797.

Lombard Project

Adjustment Summary

ComEd placed reinforcements at the Lombard TSS into service during 2000, and included in its proposed DST rate base a cost of \$3,021,978.³³³ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$19,378
Removal of hourly employee-related costs/allocated OH	20,717
Removal of excess ComEd salaried overtime	2,115
Removal of salaried employee-related costs/allocated OH	2,261
Total	\$44,471

Background

The Lombard project involved installing a third 40 MVA 138-12.5kV transformer, a circuit switcher, and busses at Lombard TSS. According to ComEd planning documents, the project was required to prevent a 12 percent transformer overload for the outage of a transformer at Glendale Heights TDC during the summer of 2000, as well as to provide relief for future growth in the area.³³⁴

The estimated cost for the project as of October 1999 totaled \$1.6 million. Actual expenditures on the project ran considerably higher.³³⁵ According to ComEd, certain tasks had not been included in the original scope of the project because they were not anticipated until detailed design was complete. These tasks included expanding the substation yard, building a new terminal facility for transmission lines entering the substation, constructing a temporary access road, and expanding water retention/detention at the facility.³³⁶

Project Costs

The following table summarizes the costs of the Lombard project by major category as of December 31, 2000.³³⁷

³³³ DR 283 for project ID T120T3.

³³⁴ DR 598, Bates numbers A0076267-68.

³³⁵ DR 598, Bates number A0076267.

³³⁶ DR 792.

³³⁷ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Lombard Project Costs

Cost Category	Amount
Hourly - Regular Time	\$80,702
Hourly - Premium Time	78,042
Salaried - Regular Time	72,022
Salaried - Premium Time	19,055
Materials	1,128,440
Services/Contractors	1,278,864
Other	150,544
AFUDC, etc	14,946
Overheads	102,475
Employee Overhead Costs	96,888
Final Total	\$3,021,978

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 40 percent, and salaried overtime was approximately 15 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$19,378 and \$2,115, respectively. The concomitant adjustments for benefits and overhead for the \$19,378 and \$2,115 adjustments are \$20,717 and \$2,261, respectively.

Contractor Overtime

The main contractor on the project was Sargent & Lundy, which provided services under a lump sum contract. ComEd was unable to provide manpower information for this contractor, thus Liberty was unable to calculate any necessary adjustments.³³⁸

³³⁸ DR 783.

Lake Zurich Project

Adjustment Summary

ComEd placed reinforcements at the Lake Zurich TDC into service during 1999, and included in its proposed DST rate base a cost of \$1,689,493.³³⁹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$7,904
Removal of hourly employee-related costs/allocated OH	10,214
Total	\$18,118

Background

The Lake Zurich project involved the installation of a third 40 MVA 138-12.5kV transformer at Lake Zurich TDC. According to ComEd planning documents, the project was required to prevent a transformer overload of 9 percent at Buffalo Grove TDC, a 6 percent overload at Lake Zurich TDC, and a 4 percent overload at Aptakisic TDC, as well as to provide capacity relief for feeder overload under normal conditions in the summer of 1999.³⁴⁰

Project planning began in late 1997, and Liberty found no documents suggesting any earlier planning or authorization. The estimated cost for the project as of January 1998 totaled \$2.05 million. Actual expenditures on the project were somewhat lower.

Project Costs

The following table summarizes the costs of the Lake Zurich project by major category as of December 31, 2000.³⁴¹

Lake Zurich Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$130,506
Hourly - Premium Time	48,096
Salaried - Regular Time	112,766
Salaried - Premium Time	9,940
Materials	767,756

³³⁹ DR 283 for project ID 101814.

³⁴⁰ DR 598, Bates number A0079407.

³⁴¹ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	140,173
Other	96,815
AFUDC, etc	109,542
Overheads	148,737
Employee Overhead Costs	125,163
Final Total	\$1,689,493

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was nearly 20 percent, and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$7,904. The concomitant adjustment for benefits and overhead for the \$7,904 adjustment is \$10,214.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.³⁴²

³⁴² DR 797.

Archer Project

Adjustment Summary

ComEd placed additions at the Archer TDC into service during 2000, and included in its proposed DST rate base a cost of \$1,900,224.³⁴³ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$15,953
Removal of hourly employee-related costs/allocated OH	17,055
Removal of excess ComEd salaried overtime	646
Removal of salaried employee-related costs/allocated OH	691
Total	\$34,345

Background

The Archer project involved the replacement of two 20 MVA transformers with two 40 MVA transformers at Archer TDC. According to ComEd planning documents, the project was required to prevent a 35 percent transformer overload for the outages of a transformer during the summer of 2000.³⁴⁴

The estimated cost for the project as of October 1999 totaled \$1.53 million; actual expenditures on the project ran somewhat higher.³⁴⁵

Project Costs

The following table summarizes the costs of the Archer project by major category as of December 31, 2000.³⁴⁶

Archer Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$78,074
Hourly - Premium Time	66,189
Salaried - Regular Time	70,164
Salaried - Premium Time	13,848

³⁴³ DR 283 for project ID ARCHER.

³⁴⁴ DR 598, Bates number A0077615.

³⁴⁵ DR 598, Bates numbers A0077613-4.

³⁴⁶ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Materials	1,155,224
Services/Contractors	92,598
Other	155,918
AFUDC, etc	50,524
Overheads	98,315
Employee Overhead Costs	119,370
Final Total	\$1,900,224

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 36 percent, and salaried overtime was approximately 12 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$15,953 and \$646, respectively. The concomitant adjustment for benefits and overhead for the \$15,953 and \$646 adjustments are \$17,055 and \$691, respectively.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.³⁴⁷

³⁴⁷ DR 797.

Maryland Project

Adjustment Summary

ComEd placed reinforcements at the Maryland TSS into service during 1999, and included in its proposed DST rate base a cost of \$3,654,422.³⁴⁸ Liberty has recommended no adjustments for the Maryland project.

Background

The Maryland project involved installing a second 40 MVA transformer, circuit switcher, circuit breakers, and relays at Maryland TSS. According to ComEd planning documents from 1991, the project was required to prevent low voltage for customers in the Mount Morris and Oregon areas for the loss of the Maryland 138-34kV transformer during the summer of 1993.³⁴⁹ ComEd provided no information on the reason for the delay of the project until 1999.

The estimated cost for the project as of June 1991 was \$2.4 million. Actual expenditures on the project ran much higher.³⁵⁰ While part of the increase was due to inflation, the scope of the original project had also been expanded to include SCADA, a 34.5 kV feeder position and a 138kV transmission tap structure and dead-end poles.³⁵¹

Project Costs

The following table summarizes the costs of the Maryland project by major category as of December 31, 2000.³⁵²

Maryland Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$788,734
Hourly - Premium Time	306
Salaried - Regular Time	20,285
Salaried - Premium Time	2,467
Materials	496,362
Services/Contractors	1,817

³⁴⁸ DR 283 for project ID K06498.

³⁴⁹ DR 598, Bates number A0074572.

³⁵⁰ DR 598, Bates number A0074573.

³⁵¹ DR 791. If one allowed for a 2 percent growth in cost from 1991 to 1999, when the project was completed, the estimate would grow to \$2.8 million.

³⁵² DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Other	1,664,048
AFUDC, etc	41,610
Overheads	282,748
Employee Overhead Costs	356,046
Final Total	\$3,654,422

ComEd Employee Overtime

The amount of ComEd craft overtime and salaried overtime used on the project was less than 10 percent. Therefore, no adjustment is required.

Contractor Overtime

According to ComEd, Fluor Daniel provided contract services on the project, but no overtime charges were incurred as part of the charges.³⁵³

³⁵³ DR 785. ComEd also stated that costs for contracting and materials pre-1998 were typically charged to resource type "Other" when the costs were moved to the new CBMS accounting system.

Matteson Project

Adjustment Summary

ComEd placed improvements at the Matteson TSS into service during 2000, and included in its proposed DST rate base a cost of \$1,813,172.³⁵⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$4,717
Removal of hourly employee-related costs/allocated OH	5,043
Total	\$9,760

Background

This project involved the installation of a third 40 MVA 138-12.5kV transformer, outdoor vacuum circuit breakers, a relay panel, and auxiliary power transformers at Matteson TSS. According to ComEd planning documents, the project was required to prevent a summer emergency overload of 18 percent in the year 2000 on the remaining 12kV transformer in the event of a loss of one of the two existing 40 MVA transformers at Matteson.³⁵⁵ ComEd documents indicate planning for the project as far back as 1991.³⁵⁶

The estimated cost for the project as of January 2000 totaled \$1.8 million, which proved very close to actual final expenditures.³⁵⁷

Project Costs

The following table summarizes the costs of the Matteson project by major category as of December 31, 2000.³⁵⁸

Matteson Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$100,819
Hourly - Premium Time	32,526
Salaried - Regular Time	90,064

³⁵⁴ DR 283 for project ID A11269.

³⁵⁵ DR 598, Bates number A0077761.

³⁵⁶ DR 598. The project diagram justification document dated June 13, 1991, Bates number A0077765, indicated that the budget was \$2.04 million. The need for the project at that time was to prevent a summer overload of 7 percent and to provide for future load growth in the Matteson area.

³⁵⁷ DR 598, Bates numbers A0077759-60.

³⁵⁸ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Salaried - Premium Time	9,261
Materials	681,555
Services/Contractors	182,429
Other	484,751
AFUDC, etc	0
Overheads	110,384
Employee Overhead Costs	121,383
Final Total	\$1,813,172

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was approximately 18 percent and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$4,717. The concomitant adjustment for benefits and overhead for the \$4,717 adjustment is \$5,043.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.³⁵⁹

³⁵⁹ DR 797.

North Aurora Project

Adjustment Summary

ComEd placed an additional transformer at North Aurora TSS into service during 2000, and included in its proposed DST rate base a cost of \$2,483,222.³⁶⁰ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$19,675
Removal of hourly employee-related costs/allocated OH	21,035
Total	\$40,710

Background

The North Aurora project involved installing a third 40 MVA 138-34kV transformer at North Aurora TSS. According to ComEd planning documents, the project was required to prevent expected overloads in the North Aurora area, specifically on transformers at North Aurora, West Chicago TSS, and Electric Junction TSS, during the summer of 1999.³⁶¹

The estimated cost for the project as of September 1998 totaled \$1.7 million. Actual expenditures proved considerably higher.³⁶² According to ComEd, certain tasks had not been included in the original scope of the project because they were not anticipated until detailed design was complete. These tasks included replacement of auxiliary power and DC power systems for the substation, and installation of additional cabling trays at the facility.³⁶³

Project Costs

The following table summarizes the costs of the North Aurora project by major category as of December 31, 2000.³⁶⁴

North Aurora Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$169,829
Hourly - Premium Time	93,888
Salaried - Regular Time	204,979

³⁶⁰ DR 283 for project ID TSS056.

³⁶¹ DR 598, Bates numbers A0075799-801.

³⁶² DR 598, Bates number A0075799.

³⁶³ DR 793.

³⁶⁴ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Salaried - Premium Time	35,785
Materials	836,515
Services/Contractors	253,302
Other	159,798
AFUDC, etc	277,220
Overheads	215,974
Employee Overhead Costs	235,933
Final Total	\$2,483,222

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 27 percent and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$19,675. The concomitant adjustment for benefits and overhead for the \$19,675 adjustment is \$21,035.

Contractor Overtime

According to ComEd, the major contractor on the project was Lindblad Construction, which provided civil and foundation construction services under a firm price contract and received payments totaling approximately \$140,000. ComEd was unable to provide manpower information for this contractor, thus Liberty was unable to calculate any necessary adjustments.³⁶⁵

³⁶⁵ DR 797.

Oswego Project

Adjustment Summary

ComEd placed the Oswego project into service during 2000, and included in its proposed DST rate base a cost of \$2,785,133.³⁶⁶ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$15,941
Removal of hourly employee-related costs/allocated OH	17,043
Total	\$32,984

Background

The Oswego project involved installing an initial 40 MVA transformer and three 12kV distribution feeders at Oswego TDC. According to ComEd planning documents, the project was required to relieve overload of 6 percent on 138-12.5kV transformers at Frontenac TDC.³⁶⁷

The estimated cost for the project as of December 1997 totaled \$3.3 million. Actual expenditures ran significantly lower.³⁶⁸

Project Costs

The following table summarizes the costs of the Oswego project by major category as of December 31, 2000.³⁶⁹

Oswego Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$166,001
Hourly - Premium Time	80,805
Salaried - Regular Time	120,261
Salaried - Premium Time	6,928
Materials	1,805,651

³⁶⁶ DR 283 for project ID 101810.

³⁶⁷ DR 598, Bates number A0075788.

³⁶⁸ DR 598, Bates numbers A0075788, 90.

³⁶⁹ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	72,300
Other	185,978
AFUDC, etc	0
Overheads	195,335
Employee Overhead Costs	150,874
Final Total	\$2,785,133

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was roughly 36 percent, and salaried overtime was less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$15,941. The concomitant adjustment for benefits and overhead for the \$15,941 adjustment is \$17,043.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.³⁷⁰

³⁷⁰ DR 797.

Prospect Heights Project

Adjustment Summary

ComEd placed Prospect Heights TSS improvements into service during 2000, and included in its proposed DST rate base a cost of \$1,741,459.³⁷¹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$7,508
Removal of hourly employee-related costs/allocated OH	8,026
Total	\$15,534

Background

The Prospect Heights project involved the installation of a third 40 MVA transformer and bus sections at Prospect Heights TSS. According to ComEd planning documents, the project was required to prevent an 11 percent overload for the loss of a transformer in the year 2000 at both Arlington TDC and Mt. Prospect TDC.³⁷² ComEd documents indicate project planning activity as far back as 1991.³⁷³

The estimated cost for the project as of January 2000 totaled \$1.5 million. Actual expenditures proved to be somewhat higher.³⁷⁴

Project Costs

The following table summarizes the costs of the Prospect Heights project by major category as of December 31, 2000.³⁷⁵

Prospect Heights Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$88,112
Hourly - Premium Time	39,711
Salaried - Regular Time	46,729
Salaried - Premium Time	8,404

³⁷¹ DR 283 for project ID A11234.

³⁷² DR 598, Bates number A0076324.

³⁷³ DR 598. The budget request document dated September 23, 1991, Bates number A0076329, indicated that the budget was \$1.5 million. The project purpose at that time was to prevent a 16.2 percent overload for the loss of a transformer at Prospect Heights during the summer of 1994.

³⁷⁴ DR 598, Bates number A0077924.

³⁷⁵ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Materials	609,663
Services/Contractors	710,496
Other	87,238
AFUDC, etc	0
Overheads	75,383
Employee Overhead Costs	75,733
Final Total	\$1,741,459

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was approximately 23 percent, and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$7,508. The concomitant adjustment for benefits and overhead for the \$7,508 adjustment is \$8,026.

Contractor Overtime

The main contractors on the project were Sargent & Lundy and Siemens, both of which provided services under lump sum contracts. Based on the manpower information provided by ComEd, no excess overtime was used.³⁷⁶

³⁷⁶ DR 783.

West Chicago Project

Adjustment Summary

ComEd placed West Chicago TSS reinforcements into service during 2000, and included in its proposed DST rate base a cost of \$1,312,641.³⁷⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$8,217
Removal of hourly employee-related costs/allocated OH	8,784
Total	\$17,001

Background

The West Chicago project involved the installation of a fourth 40 MVA 138-34V transformer at West Chicago TSS, as well as adding three 34kV breakers, 138kV MOD, and relaying. According to ComEd planning documents, the project was required to correct a 12 percent normal overload on TR 77 at West Chicago in the year 2000, and to address to a 13 percent emergency overload on remaining 34kV transformers at the station in the event of an outage.³⁷⁸

The estimated cost for the project as of January 2000 totaled \$1.2 million. Actual expenditures on the project ran slightly higher.

Project Costs

The following table summarizes the costs of the West Chicago reinforcements by major category as of December 31, 2000.³⁷⁹

West Chicago Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$25,173
Hourly - Premium Time	31,584
Salaried - Regular Time	38,398
Salaried - Premium Time	3,792
Materials	286,079

³⁷⁷ DR 283 for project ID WCHGO4.

³⁷⁸ DR 598, Bates number A0078981.

³⁷⁹ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	752,932
Other	78,694
AFUDC, etc	6,217
Overheads	48,931
Employee Overhead Costs	40,841
Final Total	\$1,312,641

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was about 45 percent, and salaried overtime was roughly 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$8,217. The concomitant adjustment for benefits and overhead for the \$8,217 adjustment is \$8,784.

Contractor Overtime

According to ComEd, the major contractor on the project was Doyen and Associates, which received payments totaling approximately \$650,000. ComEd was unable to provide manpower information for this contractor, thus Liberty was unable to calculate any necessary adjustments.³⁸⁰

³⁸⁰ DR 797.

Emergency Work Orders

Adjustment Summary

ComEd placed the investments captured under the Emergency Work Order project into service during 2000, and included in its proposed DST rate base a cost of \$11,608,310.³⁸¹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess AFUDC	\$917,540
Removal of excess ComEd hourly overtime	\$74,060
Removal of hourly employee-related costs/allocated OH	79,044
Removal of excess ComEd salaried overtime	12,310
Removal of salaried employee-related costs/allocated OH	13,138
Total	\$1,096,092

Background

ComEd set up a project to capture the costs associated with numerous work orders completed during 1997 and 1998 that were associated with emergency work. These work orders included replacing 138kV and 12kV relays, replacing failed capacitor banks, breakers and failed transformers, and installing temperature monitors.³⁸² ComEd provided no planning documents that described the justification for these projects, and provided no estimated costs.³⁸³

Project Costs

The following table summarizes the costs of the Emergency Work Order project by major category as of December 31, 2000.³⁸⁴

Emergency Work Order Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$1,838,426
Hourly - Premium Time	553,272
Salaried - Regular Time	343,283
Salaried - Premium Time	98,248

³⁸¹ DR 283 for project ID E97TSS.

³⁸² DR 598, Bates numbers A0079843-47.

³⁸³ DR 598.

³⁸⁴ DR 599 Supplement 2. Figures represent balance in account 106 as of December 31, 2000.

Materials	1,806,688
Services/Contractors	233,530
Other	2,468,061
AFUDC, etc	2,057,577
Overheads	1,043,422
Employee Overhead Costs	1,165,805
Final Total	\$11,608,310

Liberty found that ComEd had overstated its cost for AFUDC in the Emergency Work Order project. In its proposed rate base, the Company included costs as of year-end 2000 of \$11.6 million, of which \$2.1 million was AFUDC. The Company made a reversing adjustment of \$917,540 for AFUDC in February 2001, and did not reflect that reversal in its rate base claim.³⁸⁵ Liberty concluded that this \$917,540 should be removed from rate base, because the charges appear to be the result of an accounting error.

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the project was about 17 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustments to craft and salaried labor expense would be \$74,060 and \$12,310, respectively. The concomitant adjustments for benefits and overhead for the \$74,060 and \$12,310 adjustments are \$79,044 and \$13,138, respectively.

Contractor Overtime

According to information provided by ComEd, one of the major contractors for the project was Belding Waldbridge, which provided heavy equipment moving priced according to a rate schedule. ComEd also used IHC Group (civil), Underground Systems (substation electric), and James H. Anderson (HVAC) under firm price contracts. Patton Energy provided equipment. The total amount paid to these five contractors was approximately \$1.6 million. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.³⁸⁶

³⁸⁵ For project ID E97TSS, ComEd credited \$555,462 to AFUDC-debt and \$362,078 to AFUDC-equity in February 2001. Since ComEd's claim for the Emergency Work Order project was based on costs as of year-end 2000, these credits were not reflected. Based on the data provided in the second supplemental response to DR 599, it appears that ComEd had closed out more from its general ledger account 107 (CWIP) than was charged to the project in these two areas. The reversing entries in account 107 were reflected as credits to cost in general ledger account 106 (plant account).

³⁸⁶ DR 797. It appears that some of these costs may have been recorded under resource type "Other," since the total paid to these contractors is greater than amount under resource types "Services/Contractors."

Shorewood Project

Adjustment Summary

ComEd placed the Shorewood project into service during 1999, and included in its proposed DST rate base a cost of \$3,779,808.³⁸⁷ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$22,597
Removal of hourly employee-related costs/allocated OH	24,118
Total	\$46,715

Background

The Shorewood project involved installing the first 20 MVA transformer at the site. According to ComEd planning documents, the project was required to prevent an expected overload of 12 percent at Hillcrest TDC and overloads ranging from 7 to 19 percent on related feeders. The project was also required to provide adequate capacity in the rapidly growing Will County area.³⁸⁸

The estimated cost for the project as of June 1998 totaled \$3.47 million.³⁸⁹ Actual expenditures on the project ran somewhat higher.

Project Costs

The following table summarizes the costs of the Shorewood project by major category as of December 31, 2000.³⁹⁰

Shorewood Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$216,940
Hourly - Premium Time	111,481
Salaried - Regular Time	148,820
Salaried - Premium Time	12,938
Materials	393,086

³⁸⁷ DR 283 for project ID 101815.

³⁸⁸ DR 799, Bates number A0007858.

³⁸⁹ DR 799, Bates number A0007858.

³⁹⁰ DR 784. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	1,699,478
Other	252,141
AFUDC, etc	113,703
Overheads	583,287
Employee Overhead Costs	247,935
Final Total	\$3,779,808

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was about 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$22,597. The concomitant adjustment for benefits and overhead for the \$22,597 adjustment is \$24,118.

Contractor Overtime

According to information provided by ComEd, one of the major contractors for the project was Square D, which provided a concept substation and received payments totaling roughly \$1 million. The other major contractor was Utility & Industrial Construction, which provided civil work under a firm price contract and received payments totaling roughly \$730,000. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.³⁹¹

³⁹¹ DR 794.

Bell Road Project

Adjustment Summary

ComEd placed Bell Road TDC reinforcements into service during 1998, and included in its proposed DST rate base a cost of \$1,586,399.³⁹² Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$9,119
Removal of hourly employee-related costs/allocated OH	9,733
Total	\$18,852

Background

The Bell Road project involved the installation of a third 40 MVA transformer at Bell Road TDC, as well as adding a new bus and rerouting two new feeders. The project was among those reclassified as distribution in 1999. ComEd provided no planning documents that described the justification for the project.

The estimated cost for the project as of March 1997 totaled \$1.7 million.³⁹³ Actual expenditures on the project ran slightly lower.

Project Costs

The following table summarizes the costs of the Bell Road reinforcements by major category as of December 31, 2000.³⁹⁴

Bell Road Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$96,024
Hourly - Premium Time	46,399
Salaried - Regular Time	100,988
Salaried - Premium Time	11,526
Materials	119,254

³⁹² DRs 690 and 177 for project ID F06529.

³⁹³ DR 690, Bates number A0106261.

³⁹⁴ DR 784. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	2,089
Other	870,392
AFUDC, etc	49,086
Overheads	182,290
Employee Overhead Costs	108,348
Final Total	\$1,586,399

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was about 25 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$9,119. The concomitant adjustment for benefits and overhead for the \$9,119 adjustment is \$9,733.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required. According to information provided by ComEd, the major equipment suppliers for the project were Square D and Waukesha, which received payments totaling roughly \$800,000.³⁹⁵

³⁹⁵ DR 794.

Bradley Project

Adjustment Summary

ComEd included Bradley TSS reinforcements in its proposed DST rate base at a cost of \$1,439,173.³⁹⁶ Liberty has recommended no adjustments to the claimed amount.

Background

The Bradley project involved the installation of a 40 MVA transformer to replace three 10 MVA transformers at Bradley TSS. The project was among those reclassified as distribution in 1999. ComEd provided no planning documents that described the justification for the project.

The estimated cost for the project as of September 1995 totaled \$0.8 million.³⁹⁷ Actual expenditures on the project ran significantly higher.

Project Costs

The following table summarizes the costs of the Bradley reinforcements by major category as of December 31, 2000.³⁹⁸

Bradley Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$221,961
Hourly - Premium Time	23,424
Salaried - Regular Time	54,619
Salaried - Premium Time	2,473
Materials	223,877
Services/Contractors	6,407
Other	461,036
AFUDC, etc	30,748

³⁹⁶ DRs 690 and 177 for project ID A06510. ComEd provided only work orders for this project. These work orders were initially scheduled for 1992 but were reissued in 1995. It was unclear when this project was completed or put into service.

³⁹⁷ DR 690, Bates number A0106264.

³⁹⁸ DR 784. Figures represent balance in account 106 as of December 31, 2000.

Overheads	253,938
Employee Overhead Costs	160,692
Final Total	\$1,439,173

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the Bradley project was less than 10 percent. Therefore, no adjustment is required.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required. According to information provided by ComEd, the major equipment supplier for the project was SMIT Transformers, which received payments totaling roughly \$400,000.³⁹⁹

³⁹⁹ DR 794.

Crestwood Project

Adjustment Summary

ComEd included the Crestwood project in its proposed DST rate base a cost of \$1,246,294.⁴⁰⁰ Liberty has recommended no adjustments to the claimed amount.

Background

The Crestwood project involved the installation of a circuit breaker in a 138kV line and transferring a tap, along with relaying and communications upgrades. The project was among those reclassified as distribution in 1999. ComEd provided no planning documents that described the justification for the project.

The estimated cost for the project as of April 1996 was \$0.4 million.⁴⁰¹ Actual expenditures on the project were significantly higher.

Project Costs

The following table summarizes the costs of the Crestwood project by major category as of December 31, 2000.⁴⁰²

Crestwood Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$227,189
Hourly - Premium Time	74
Salaried - Regular Time	7,952
Salaried - Premium Time	338
Materials	397,198
Services/Contractors	324
Other	200,955
AFUDC, etc	224,147

⁴⁰⁰ DRs 690 and 177 for project ID A06584.

⁴⁰¹ DR 690, Bates number A0106328. It was unclear from the document whether the estimate included the communications and relay upgrades.

⁴⁰² DR 784. Figures represent balance in account 106 as of December 31, 2000.

Overheads	89,452
Employee Overhead Costs	98,664
Final Total	\$1,246,294

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the Crestwood project was less than 10 percent. Therefore, no adjustment is required

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required. According to information provided by ComEd, the major equipment supplier for the project was Summit Manufacturing, which received payments totaling roughly \$100,000.⁴⁰³

⁴⁰³ DR 794.

McHenry Project

Adjustment Summary

ComEd placed McHenry TSS reinforcements into service during 1999, and included in its proposed DST rate base a cost of \$1,733,821.⁴⁰⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$11,406
Removal of hourly employee-related costs/allocated OH	14,740
Total	\$26,146

Background

The McHenry project involved the installation of a third 40 MVA transformer at McHenry TSS, along with related switchgear. The project was among those reclassified as distribution in 1999. ComEd provided no planning documents that described the justification for the project.

The estimated cost for the project as of November 1998 was \$1.8 million.⁴⁰⁵ Actual expenditures on the project ran slightly lower.

Project Costs

The following table summarizes the costs of the McHenry project by major category as of December 31, 2000.⁴⁰⁶

McHenry Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$101,068
Hourly - Premium Time	54,864
Salaried - Regular Time	81,254
Salaried - Premium Time	11,816
Materials	1,018,241
Services/Contractors	69,329

⁴⁰⁴ DRs 690 and 177 for project ID 101809.

⁴⁰⁵ DR 690, Bates number A0106642.

⁴⁰⁶ DR 784. Figures represent balance in account 106 as of December 31, 2000.

Other	136,796
AFUDC, etc	0
Overheads	119,075
Employee Overhead Costs	141,379
Final Total	\$1,733,821

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was over 25 percent, and salaried overtime was at acceptable levels at less than 10 percent.⁴⁰⁷ Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$11,406. The concomitant adjustment for benefits and overhead for the \$11,406 adjustment is \$14,740.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required.⁴⁰⁸

⁴⁰⁷ DR 690, Bates numbers A0106657-60, indicated that 3,195 regular hours and 961 overtime hours were used on the project.

⁴⁰⁸ DR 794.

Medical Center Project

Adjustment Summary

ComEd placed Medical Center TDC reinforcements into service during 1998, and included in its proposed DST rate base a cost of \$2,832,439.⁴⁰⁹ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$2,221
Removal of hourly employee-related costs/allocated OH	2,370
Total	\$4,591

Background

The Medical Center project involved the installation of a fourth 50 MVA transformer at Medical Center TDC, as well as related bus work. The project was among those reclassified as distribution in 1999. The project was initially planned in 1993, with capacity required by June 1996.⁴¹⁰ ComEd provided no planning documents that described the justification for the project or explained the reason for the delay.

The estimated cost for the project as of April 1997 totaled \$2.5 million.⁴¹¹ Actual expenditures on the project ran somewhat higher.

Project Costs

The following table summarizes the costs of the Medical Center project by major category as of December 31, 2000.⁴¹²

Medical Center Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$354,175
Hourly - Premium Time	66,434
Salaried - Regular Time	209,501
Salaried - Premium Time	20,112
Materials	309,964

⁴⁰⁹ DRs 690 and 177 for project ID A11219.

⁴¹⁰ DR 690, Bates number A0106847.

⁴¹¹ DR 690, Bates number A0106939.

⁴¹² DR 784. Figures represent balance in account 106 as of December 31, 2000.

Services/Contractors	98,848
Other	1,107,329
AFUDC, etc	4,931
Overheads	363,714
Employee Overhead Costs	297,432
Final Total	\$2,832,439

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was slightly over 11 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$2,221. The concomitant adjustment for benefits and overhead for the \$2,221 adjustment is \$2,370.

Contractor Overtime

There was no significant use of contractors on the project, and no adjustment is required. According to information provided by ComEd, the major equipment suppliers for the project were GE and Waukesha, which received payments totaling roughly \$1,000,000.⁴¹³

⁴¹³ DR 794.

South Elgin Project

Adjustment Summary

ComEd placed the South Elgin projects into service during 1999, and included in its proposed DST rate base a cost of \$4,516,757.⁴¹⁴ Liberty recommends the following adjustments to the claimed amount.

Adjustment Summary	
Reason for Adjustment	Amount
Removal of excess ComEd hourly overtime	\$14,377
Removal of hourly employee-related costs/allocated OH	15,345
Total	\$29,722

Background

The work at South Elgin consisted of two projects. The first involved installing a 138/34kV distribution line. The second project involved installing the first 40 MVA transformer, along with 34kV circuit breakers and a control building, at South Elgin TDC. The projects were among those reclassified as distribution in 1999. ComEd provided no planning documents that described the justification for this work.

The estimated cost for the South Elgin distribution line project was \$3.25 million.⁴¹⁵ Actual expenditures on the project were slightly higher at \$3.33 million.⁴¹⁶ ComEd provided no information on estimated cost for the transformer work.

Project Costs

The following table summarizes the costs of the South Elgin projects by major category as of December 31, 2000.⁴¹⁷

South Elgin Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$402,232
Hourly - Premium Time	114,963
Salaried - Regular Time	249,940
Salaried - Premium Time	36,875

⁴¹⁴ DRs 690 and 177 for project IDs A06522 (34 kV line) and F06521 (40 MVA transformer).

⁴¹⁵ DR 690, Bates numbers A0107039- 40.

⁴¹⁶ DR 784, account 106 balance as of December 31, 2000 for project ID A06522.

⁴¹⁷ DR 784. Figures represent balance in account 106 as of December 31, 2000.

Materials	1,386,319
Services/Contractors	148,777
Other	767,745
AFUDC, etc	342,710
Overheads	668,429
Employee Overhead Costs	398,767
Final Total	\$4,516,757

ComEd Employee Overtime

The amount of ComEd craft overtime used on the project was about 16 percent, and salaried overtime was at acceptable levels at less than 10 percent. Using 10 percent as a benchmark for the appropriate level of overtime, the adjustment to craft labor expense would be \$14,377. The concomitant adjustment for benefits and overhead for the \$14,377 adjustment is \$15,345.

Contractor Overtime

According to information provided by ComEd, the major contractor for the project was Utility & Industrial Construction, which provided civil work under a firm price contract and received payments totaling roughly \$475,000. ComEd was unable to provide manpower information for its contractors during this time period, thus Liberty was unable to calculate any necessary adjustments.⁴¹⁸

⁴¹⁸ DR 794. It appears that some of these costs may have been recorded under resource type "Other," since the total paid to U&I is greater than amount under resource types "Services/Contractors."

Mokena Project

Adjustment Summary

ComEd placed the Mokena project into service during 1998, and included in its proposed DST rate base a cost of \$1,625,257.⁴¹⁹ Liberty has recommended no adjustments to the claimed amount.

Background

The Mokena project involved the replacement of two 20 MVA transformers with two 40 MVA transformers. The project was among those reclassified as distribution in 1999. ComEd provided no planning documents related to the justification for this project, and no estimated costs.⁴²⁰

Project Costs

The following table summarizes the costs of the Mokena project by major category as of December 31, 2000.⁴²¹

Mokena Project Costs	
Cost Category	Amount
Hourly - Regular Time	\$202,663
Hourly - Premium Time	196
Salaried - Regular Time	377
Salaried - Premium Time	0
Materials	82,556
Services/Contractors	0
Other	925,493
AFUDC, etc	316,425
Overheads	27,874
Employee Overhead Costs	69,676
Final Total	\$1,625,257

⁴¹⁹ DRs 690 and 177 for project ID A06532.

⁴²⁰ DR 690.

⁴²¹ DR 784. Figures represent balance in account 106 as of December 31, 2000.

ComEd Employee Overtime

The amount of ComEd craft and salaried overtime used on the Mokena project was less than 10 percent. Therefore, no adjustment is required.

Contractor Overtime

There was no use of contractors on the project, and no adjustment is required. According to information provided by ComEd, the major equipment supplier for the project was Waukesha, which received payments totaling roughly \$900,000.⁴²²

⁴²² DR 794.